CNC Manager

CNT830 series

-Milling Controller

2002/09 VER 1.0

TECHNOLOGY MANUAL

矽特科技有限公司

C-TEK TECHNOLOGY CORPORATION

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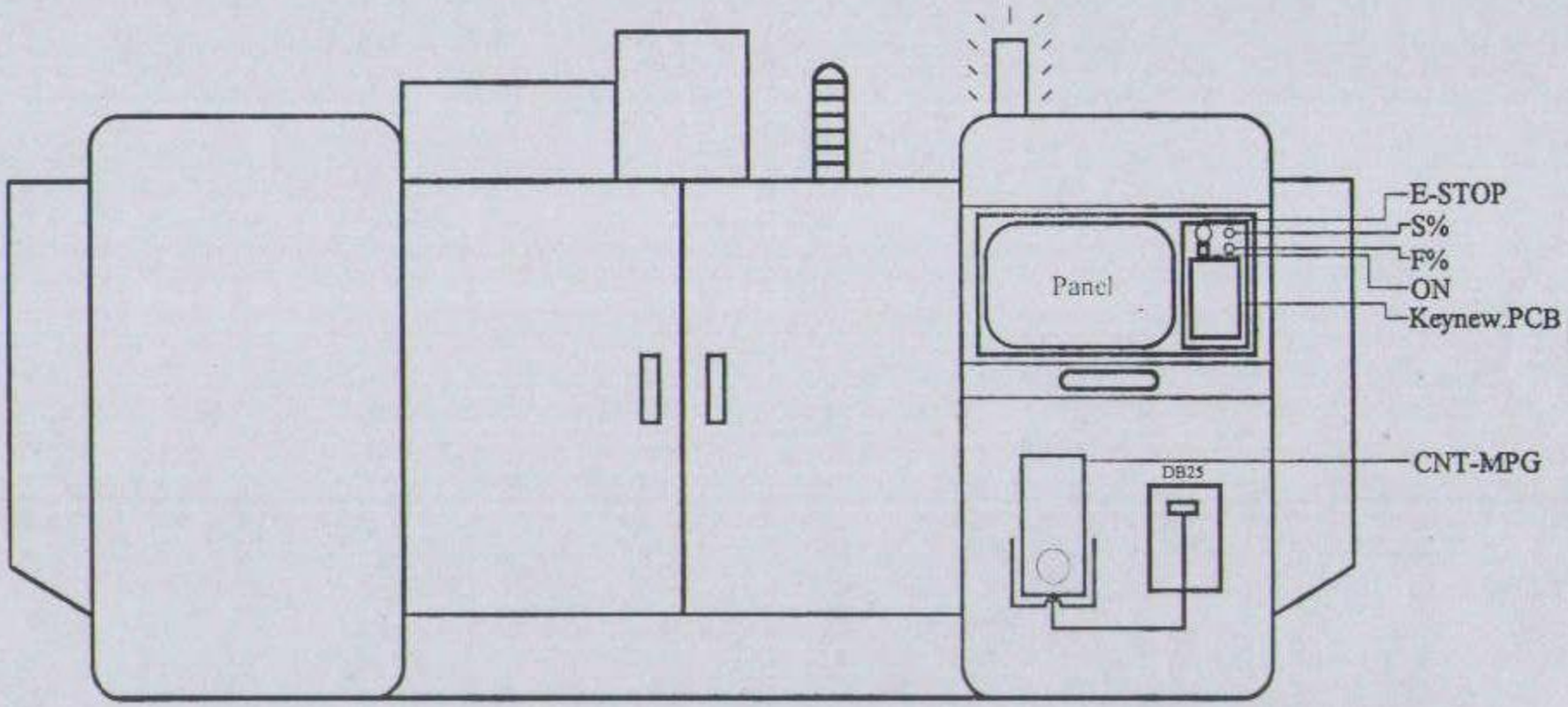
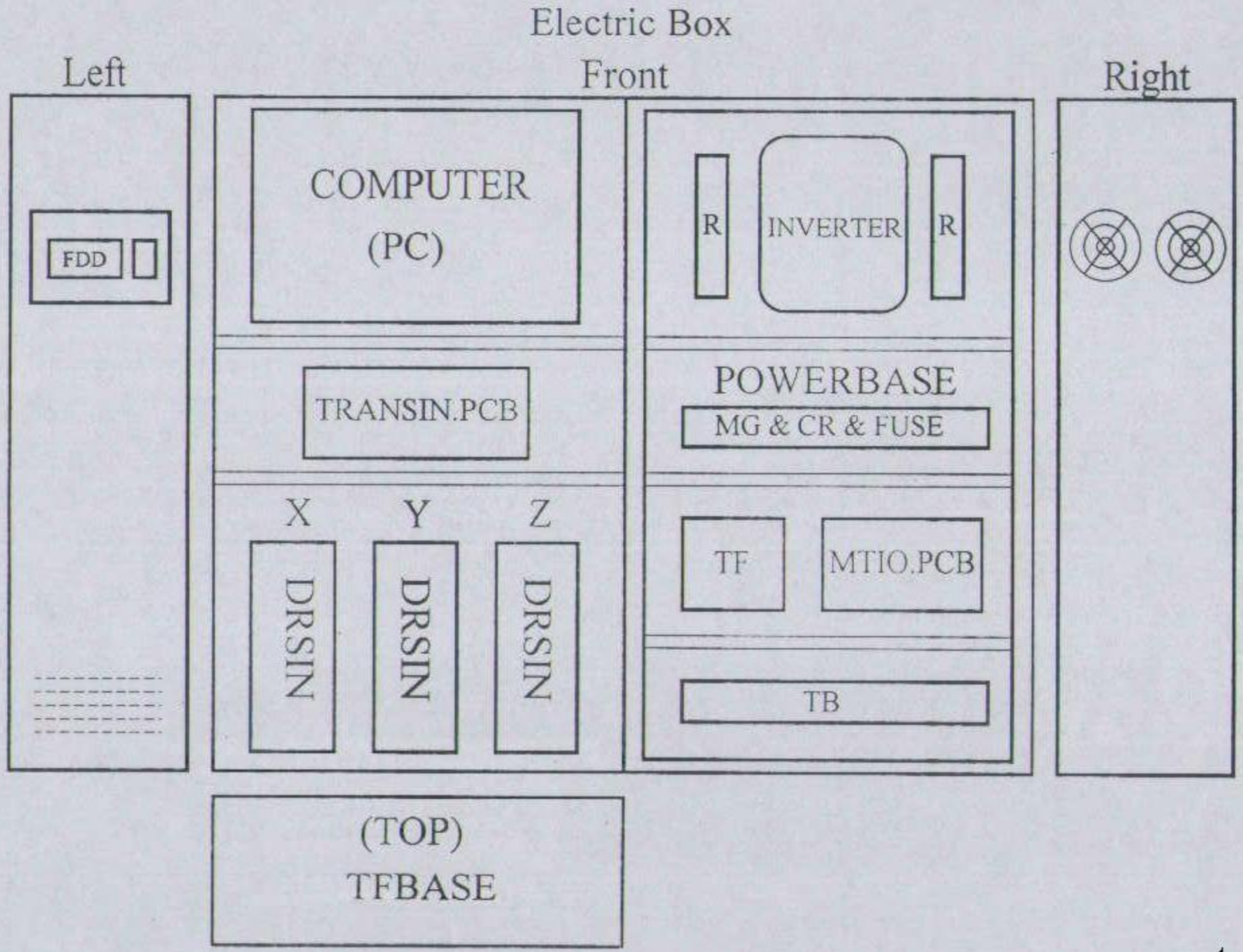
Control Box



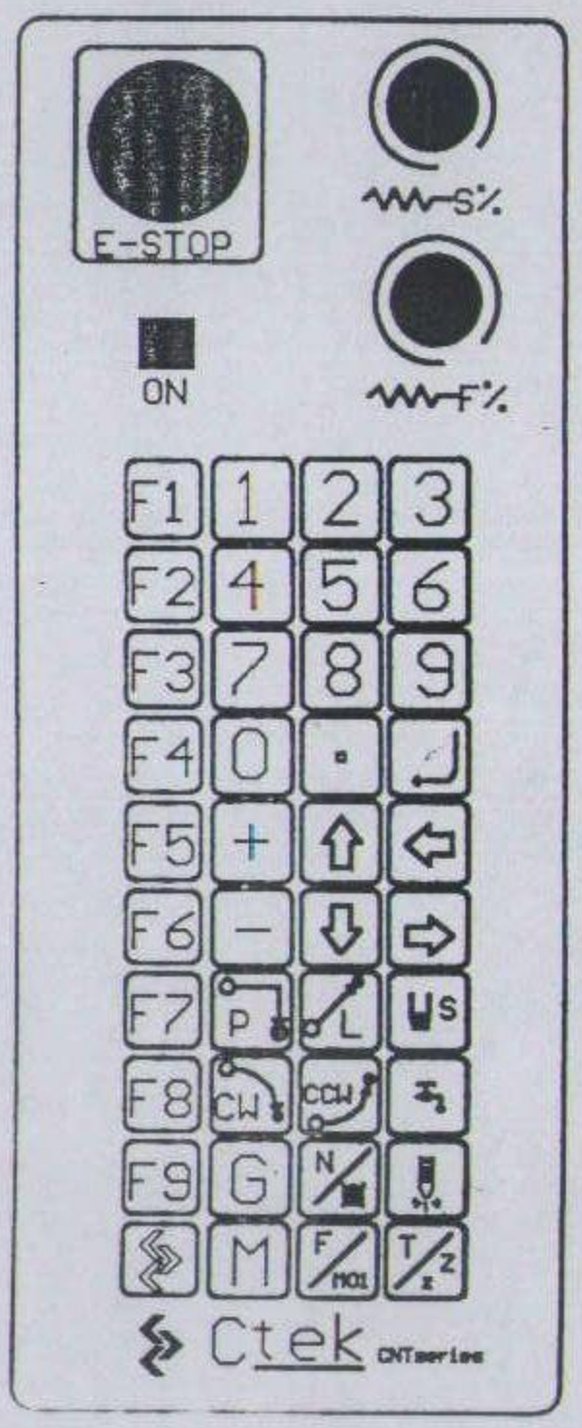

Electric Box
Left
Front
Right
FDD
COMPUTER
(PC)
R
INVERTER
R
TRANSIN.PCB
POWERBASE
MG & CR & FUSE
X
Y
Z
DRSIN
DRSIN
DRSIN
TF
MTIO.PCB
TB
(TOP)
TFBASE

Front: Panel 1of2

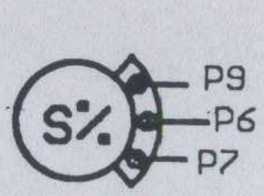
Ctek CNC Manager

CNT830

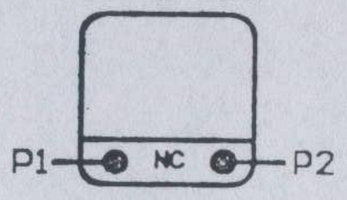
——Milling Controller

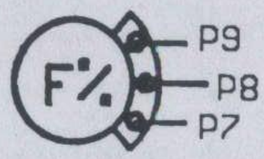


(TO CN16-W)

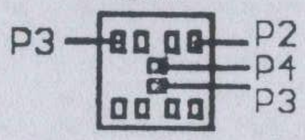


E-STOP





ON



KEYNEW.PCB

U1

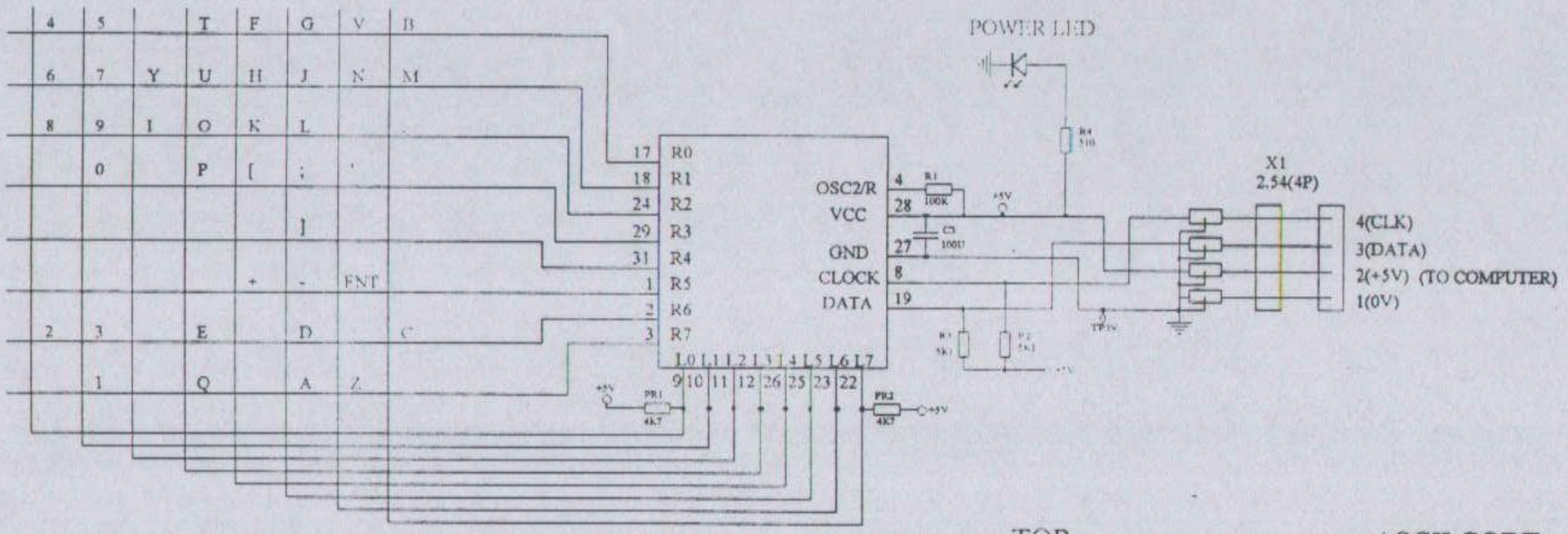
X1(2.54-90)(TO PC)

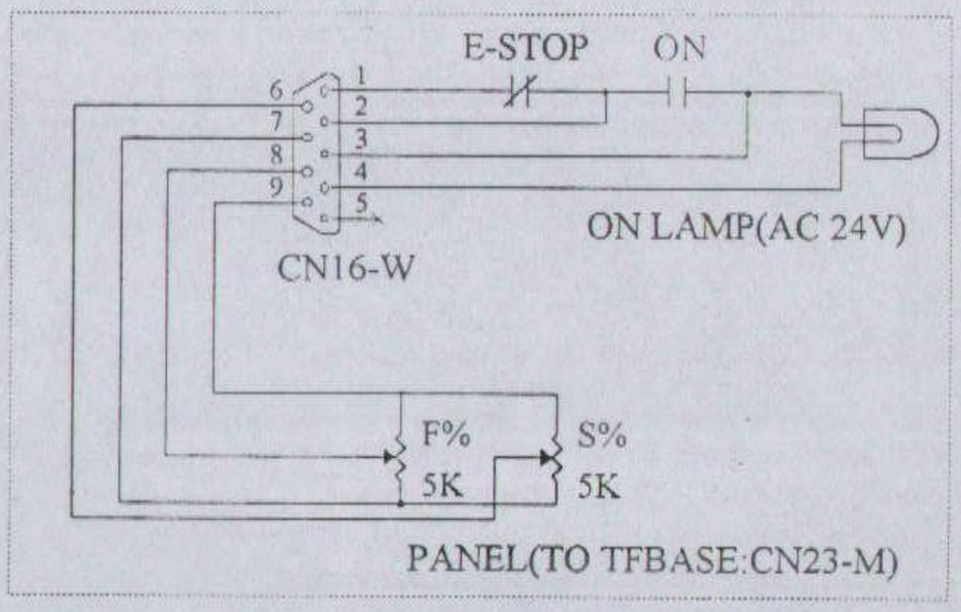
1

POWER LED

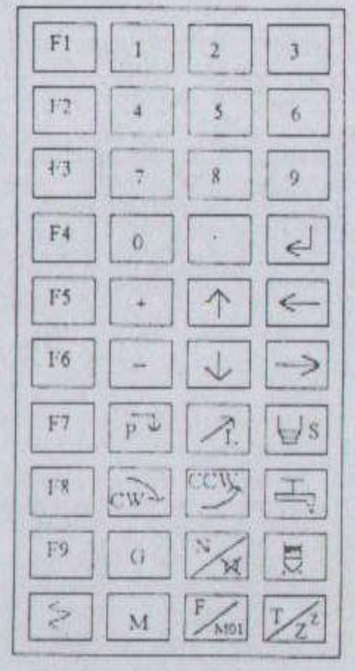
Back: Panel 2of2

KEYNEW.PCB & CIRCUIT

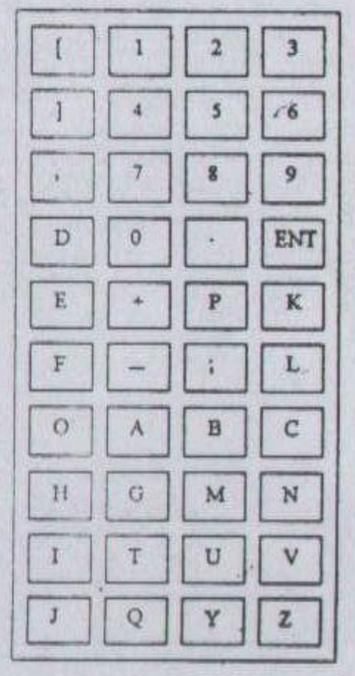




TOP



ASCII CODE



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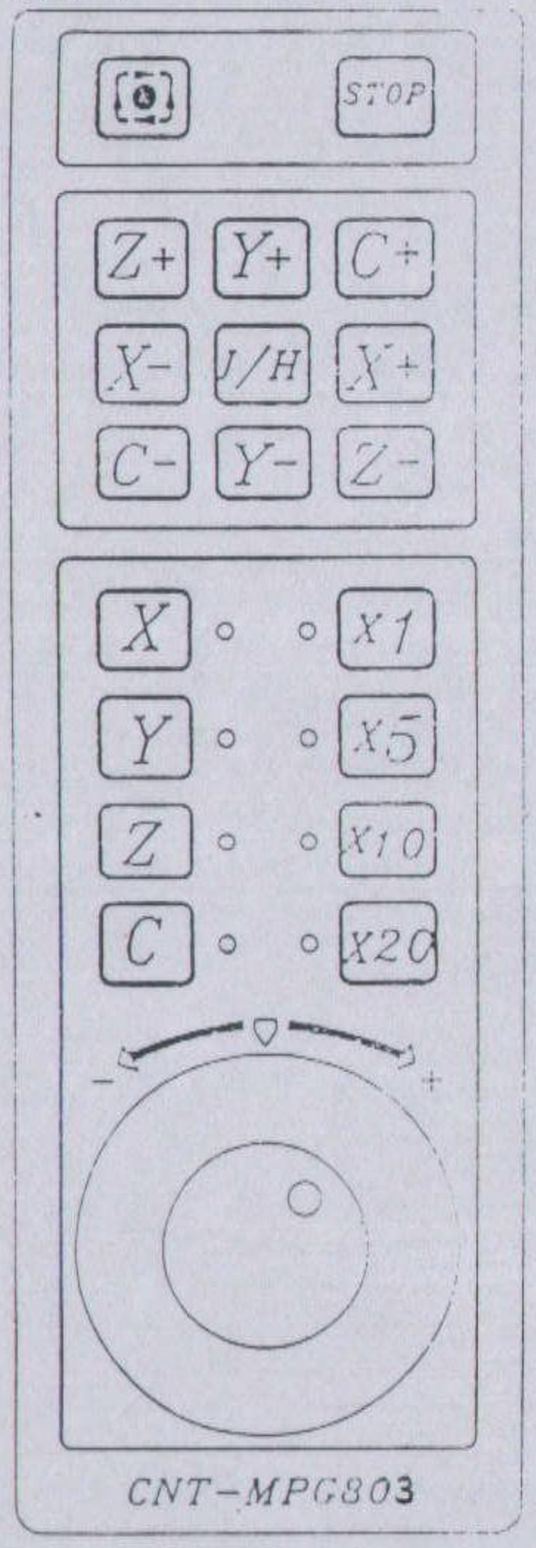
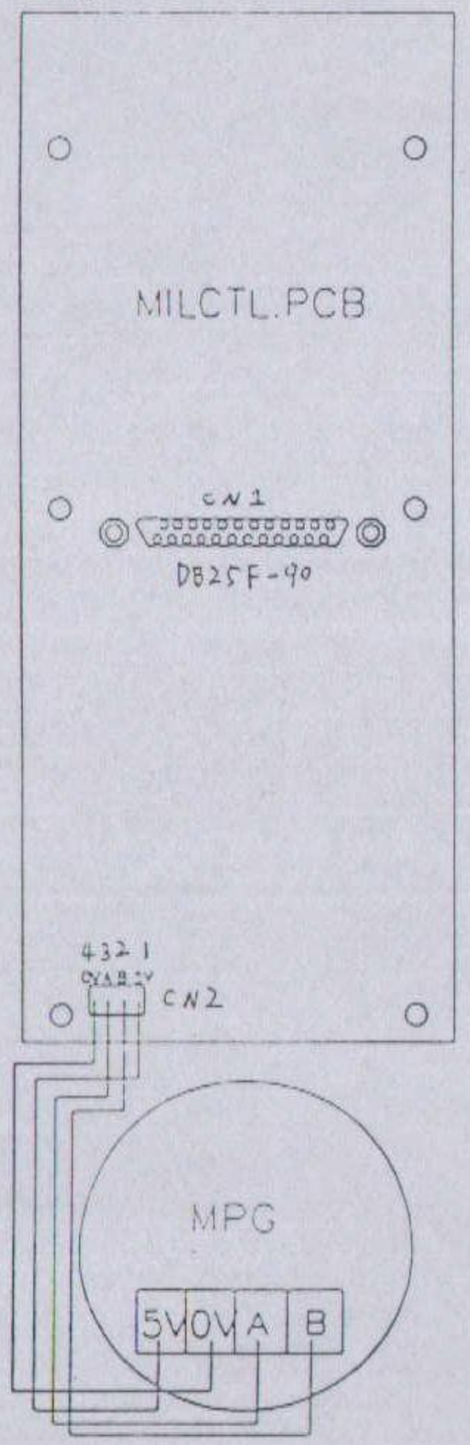
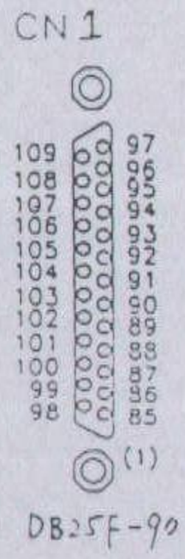


Inner:

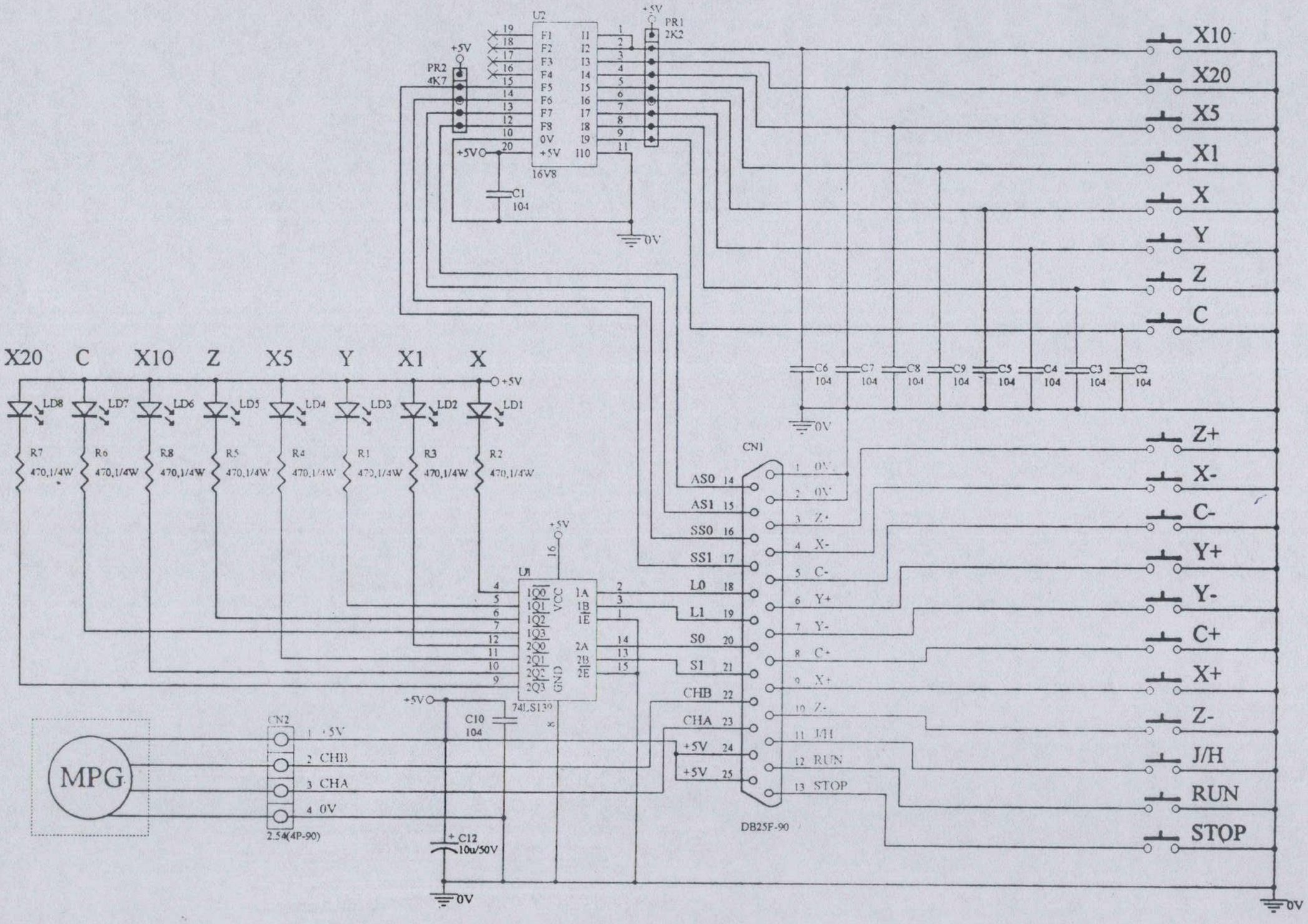


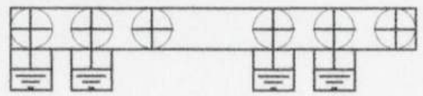


Ctek Co.,Ltd

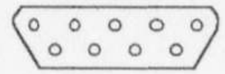
NO. CNT-MPG803

MILCTL.PCB(V2.0)





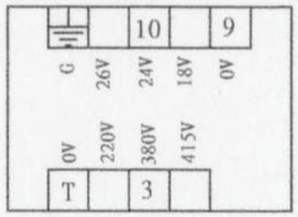
CN23-W

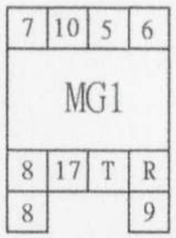


TF-10

	AC 240V	AC 220V	AC 0V	19	AC0	16	15		6		5	
	240	220	0	19	0	110	0	415	380	220	0	G

TF2





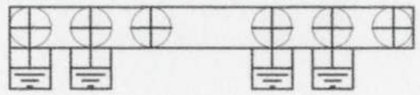
4-8

Title: TF BASE DISTRBUTE DIAGRAM

Size: A4 | CHANG

C-TEK CO., LTD | Sheet 1 of 1 | Ver: 1

31-Mar-2008



TF-10

19	16	10	L6	L4	220 AC	220 AC	L6	L4
6A	6A	4A	2A	2A	25A	25A	25A	25A
154	153	152	151	150	220 AC	220 AC	T5	R5

DRIVER

TF-10

	AC 240V	AC 220V	AC 0V	19	AC0	16	15		6		5	
	240	220	0	19	0	110	0	415	380	220	0	G

TF2

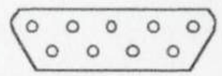
		10		9
G	26V	24V	18V	0V

0V	220V	380V	415V
150	151		

152

7		5	6
MG1			
8	17	T5	R5
8			9

CN23-W



Title: TF BASE DISTRBUTE DIAGRAM (CSA)

Size: A4 | CHANG

C-TEK CO., LTD | Sheet 1 of 1 | Ver: 1

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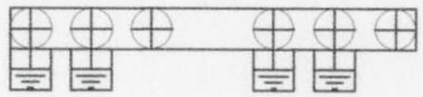
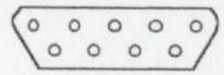
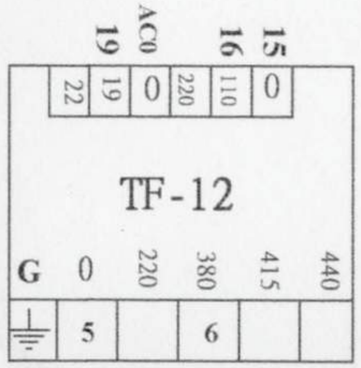
4-8

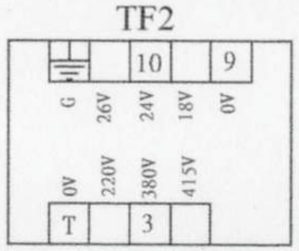
4-8A

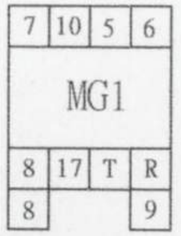


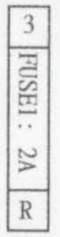
CN23-W











Title: KM-2085 WITHOUT ATC TF BASE DISTRBUTE DIAGRAM

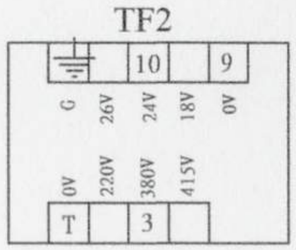
Size: A4 | CHANG

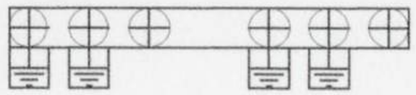
C-TEK CO., LTD | Sheet 1 of 1 | Ver: 1

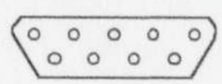
31-Mar-2008

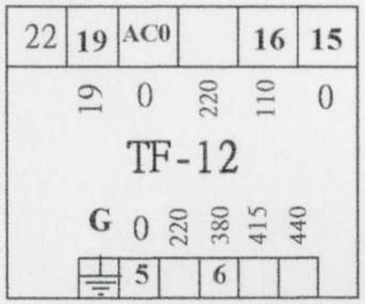
4-8

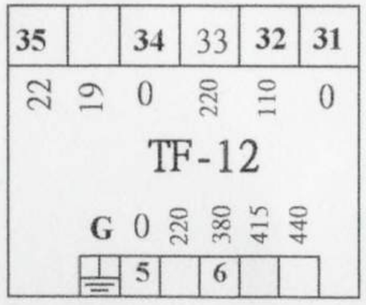
4-8B

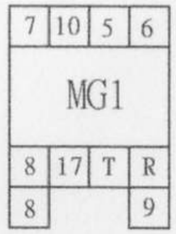










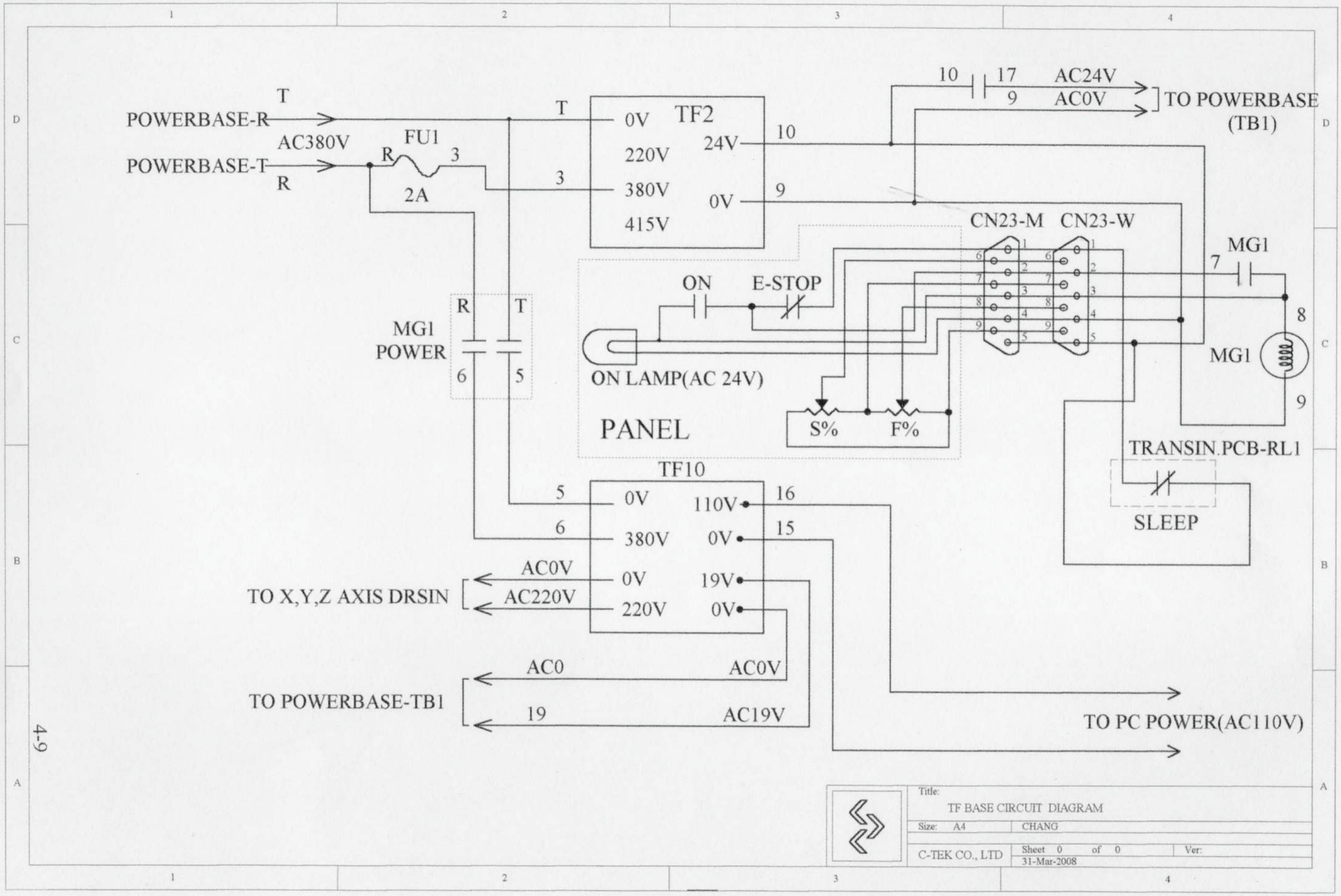


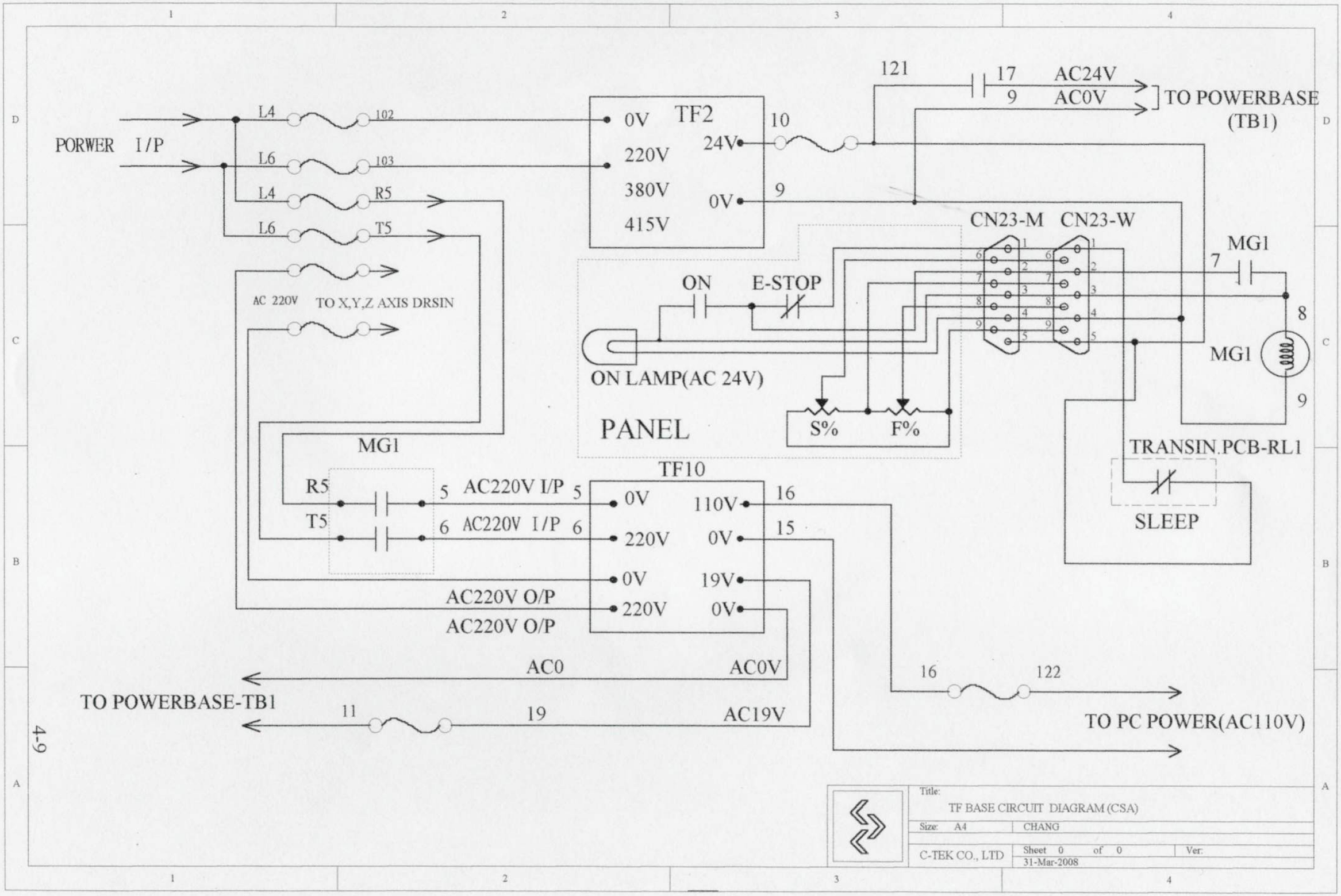
Title: KM-2085 ATC TF BASE DISTRBUTE DIAGRAM

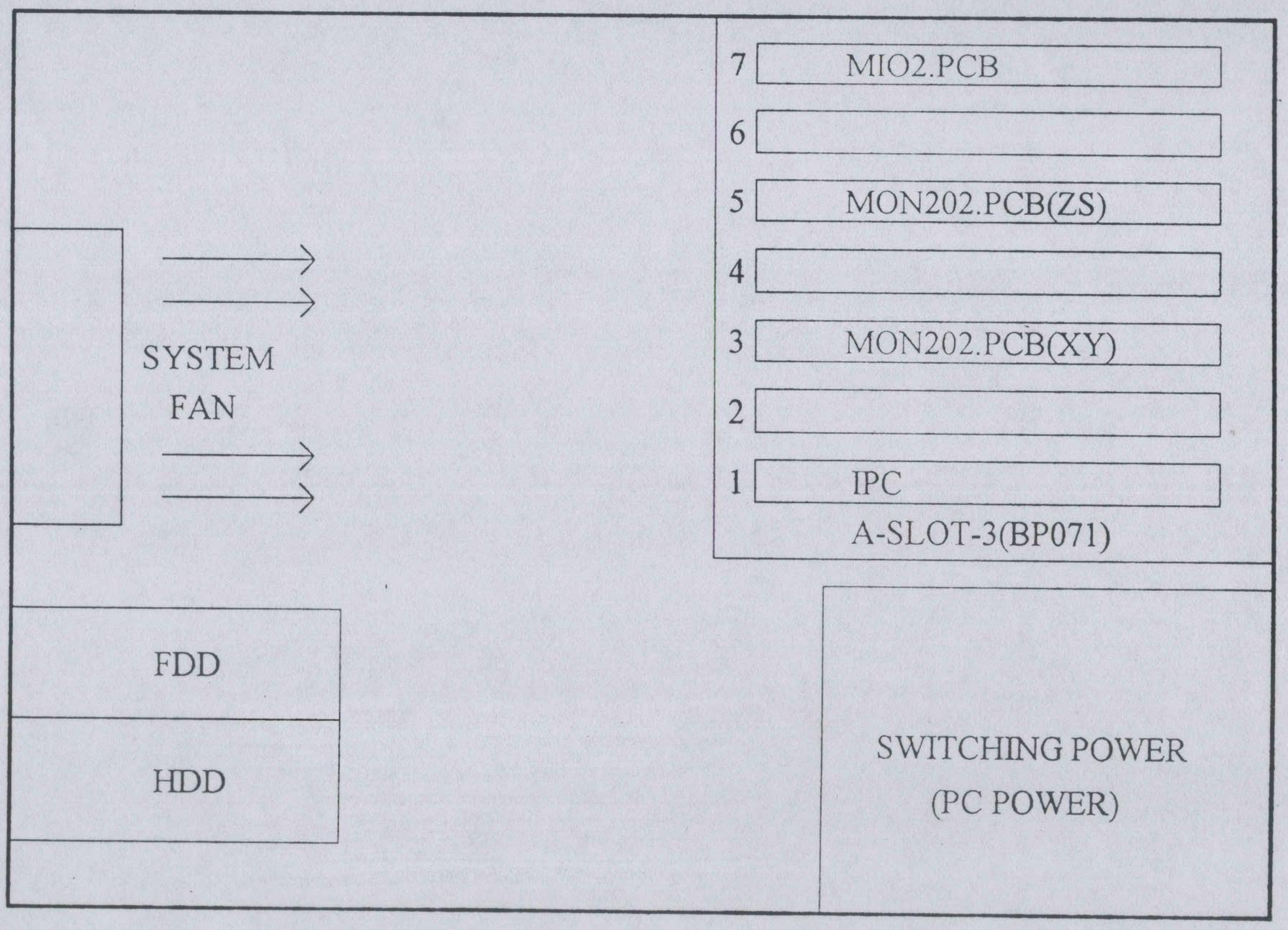
Size: A4 | CHANG

C-TEK CO., LTD | Sheet 1 of 1 | Ver: 1

31-Mar-2008


POWERBASE-R
AC380V
POWERBASE-T
T
R
FU1
2A
3
T
3
TF2
0V
220V
380V
415V
24V
0V
10
9
10
17
AC24V
9
AC0V
TO POWERBASE
(TB1)
CN23-M
CN23-W
MG1
7
8
9
MG1
MG1
POWER
R
T
6
5
ON
E-STOP
ON LAMP(AC 24V)
PANEL
S%
F%
TRANSIN.PCB-RL1
SLEEP
TF10
5
6
0V
380V
110V
0V
16
15
AC0V
AC220V
0V
220V
19V
0V
TO X,Y,Z AXIS DRSIN
AC0
AC0V
19
AC19V
TO POWERBASE-TB1
TO PC POWER(AC110V)
4-9
Title:
TF BASE CIRCUIT DIAGRAM
Size: A4
CHANG
C-TEK CO., LTD
Sheet 0 of 0
31-Mar-2008
Ver:


PORWER I/P
L4
L6
L4
L6
102
103
R5
T5
AC 220V
TO X,Y,Z AXIS DRSIN
MG1
R5
T5
5 AC220V I/P 5
6 AC220V I/P 6
AC220V O/P
AC220V O/P
TF2
0V
220V
380V
415V
24V
0V
10
9
TF10
0V
220V
0V
220V
110V
0V
19V
0V
16
15
AC0
AC0V
TO POWERBASE-TB1
11
19
AC19V
121
17 AC24V
9 AC0V
TO POWERBASE
(TB1)
CN23-M CN23-W
ON
E-STOP
ON LAMP(AC 24V)
PANEL
S%
F%
7 MG1
8
MG1
9
TRANSIN.PCB-RL1
SLEEP
16
122
TO PC POWER(AC110V)
4-9
Title:
TF BASE CIRCUIT DIAGRAM (CSA)
Size: A4
CHANG
C-TEK CO., LTD
Sheet 0 of 0
Ver:
31-Mar-2008


TOP:
PC 1 OF 2
7
MIO2.PCB
6
5
MON202.PCB(ZS)
4
3
MON202.PCB(XY)
2
1
IPC
A-SLOT-3(BP071)
SYSTEM
FAN
FDD
HDD
SWITCHING POWER
(PC POWER)

PC 2 OF 2

BACK:

7

(TO TRANSIN.PCB-X12)
X2
DB15-F

MIO2.PCB

(TO REMOTE CONTROL BOX)
X1
DB25-F

6

(TO MTIO.PCB-X7)
DB15-F

(TO MTIO.PCB-X1)
DB25-F

5

(TO TRANSIN.PCB-X13)
X2
DB15-M

MON202.PCB
(ZS)

(TO TRANSIN.PCB-X11)
X1
DB25-M

4

3

(TO TRANSIN.PCB-X6)
X2
DB15-M

MON202.PCB
(XY)

(TO TRANSIN.PCB-X15)
X1
DB25-M

2

1

VGA
(TO MONITOR)

NET

RS-232
DB9-M

(TO KEYNEW.PCB-X1)

FAN

(TO MONITOR)
3P-F

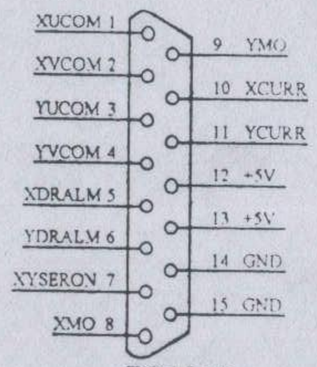
115V
ALWAYS 115V

3P-M
(FROM TF10-AC 110V)

PIN FUNCTION

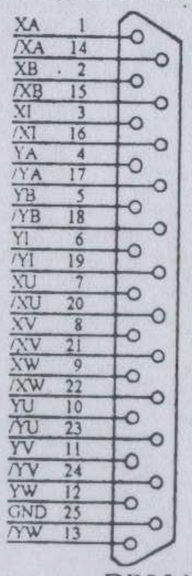
MON202.PCB(XY)

X2(TO TRANSIN.PCB-X6)



DB15-M

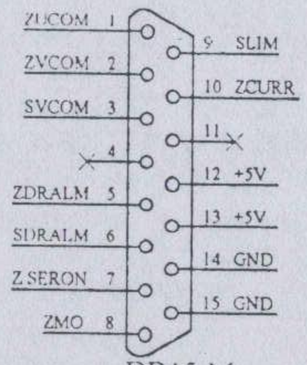
X1(TO TRANSIN.PCB-X15)



DB25-M

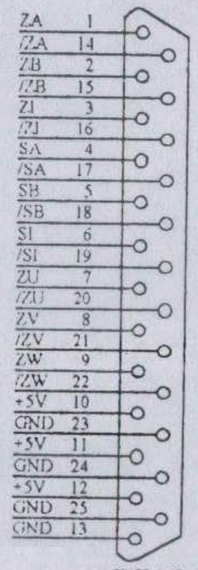
MON202.PCB(ZS)

X2(TO TRANSIN.PCB-X13)



DB15-M

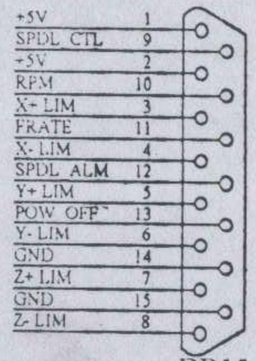
X1(TO TRANSIN.PCB-X11)



DB25-M

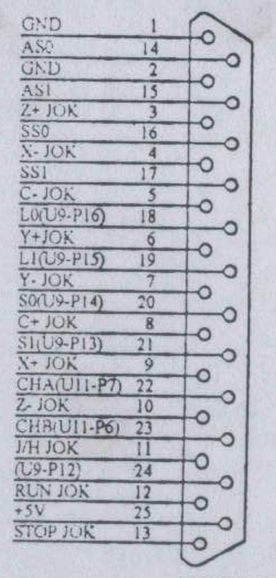
MIO2.PCB

X2(TO TRANSIN.PCB-X12)

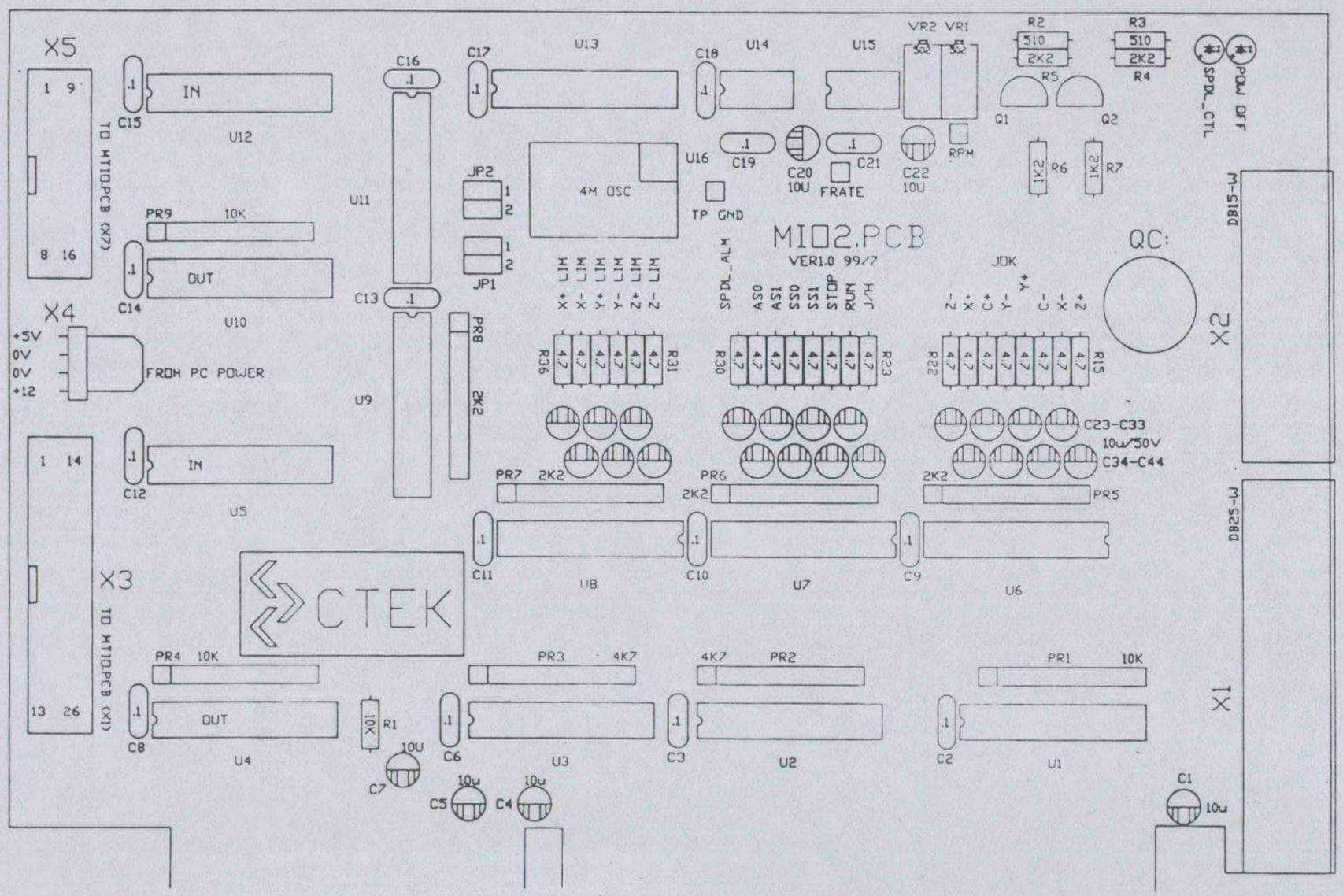


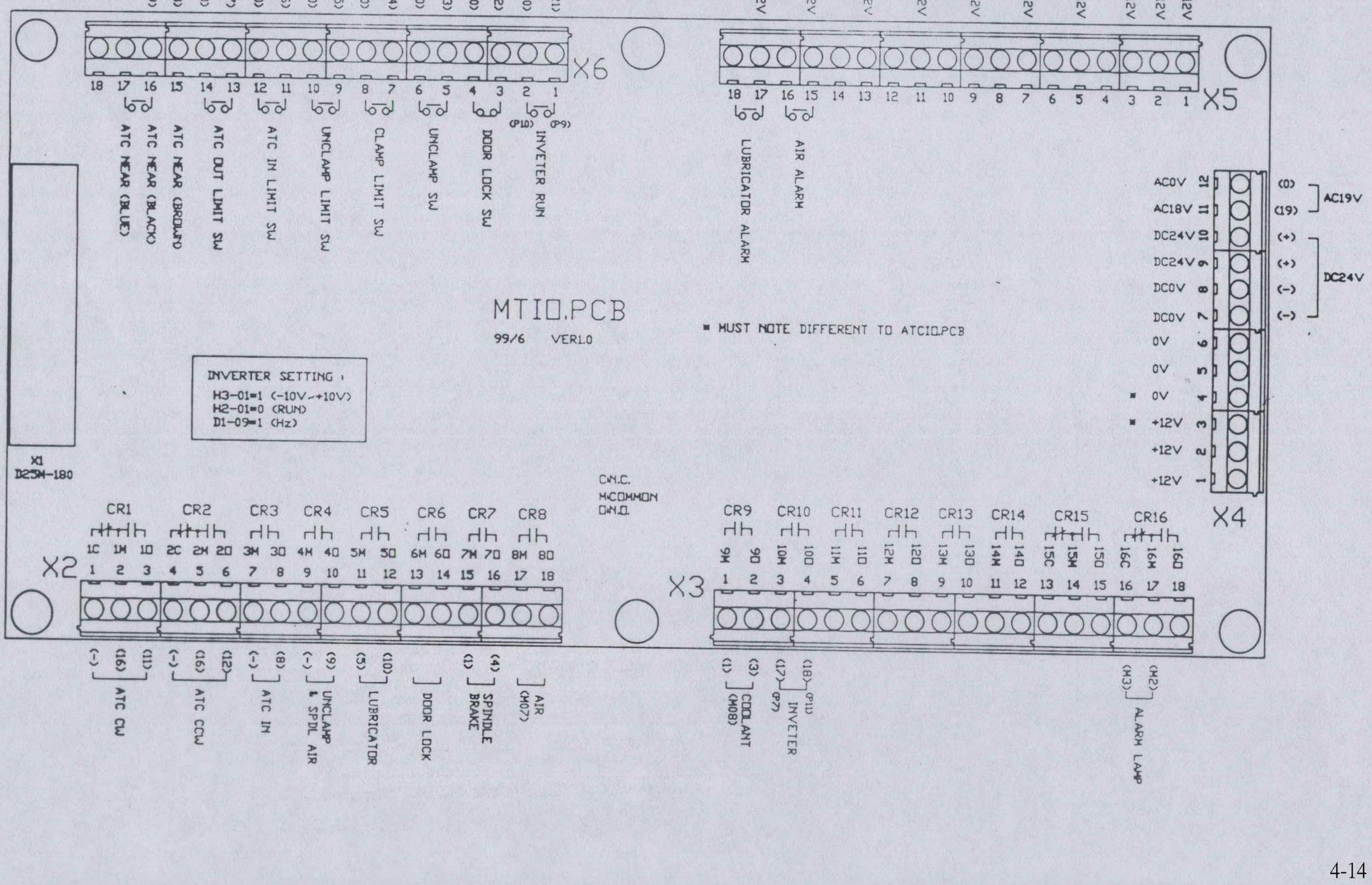
DB15-F

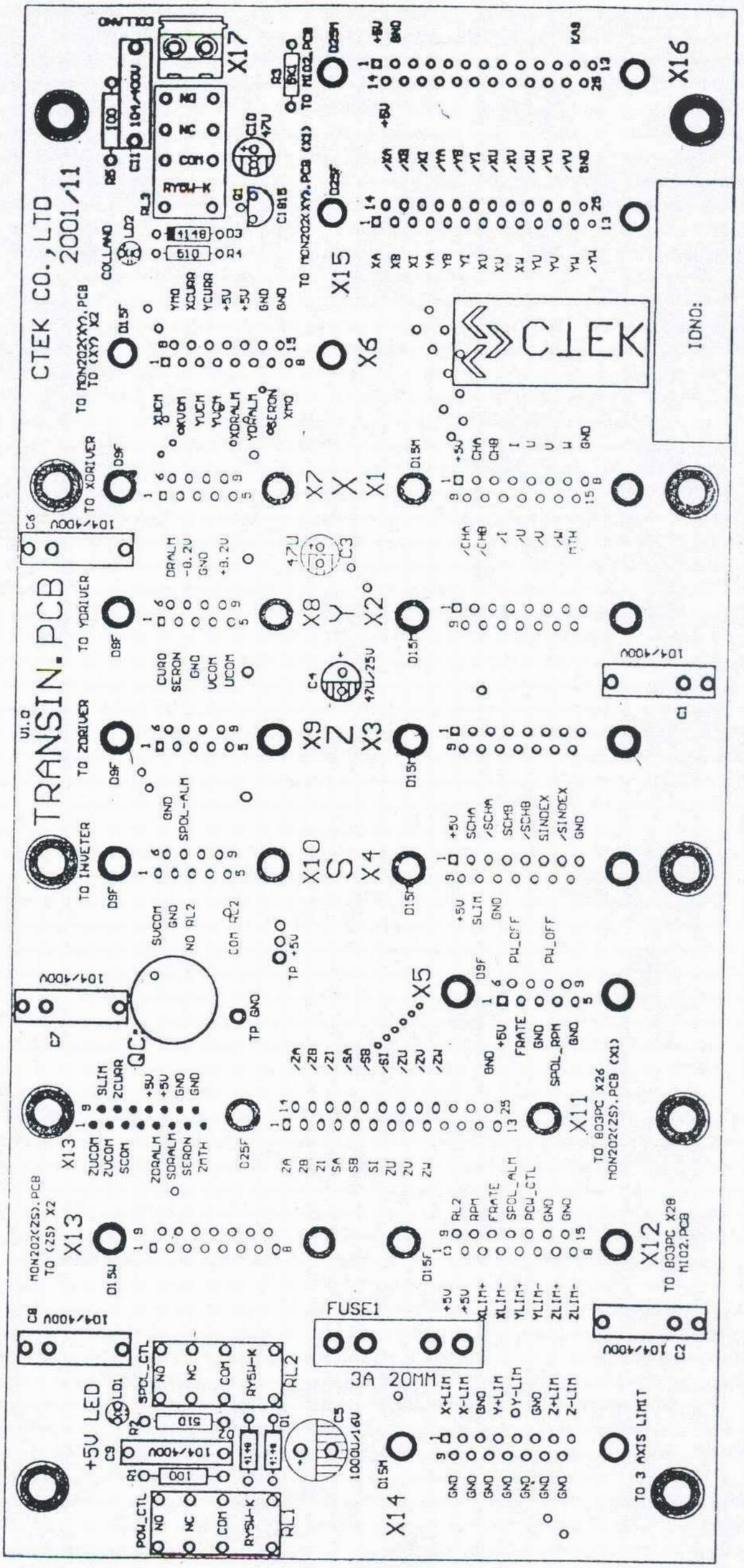
X1(TO REMOTE CONTROL BOX CNT-MPG803)



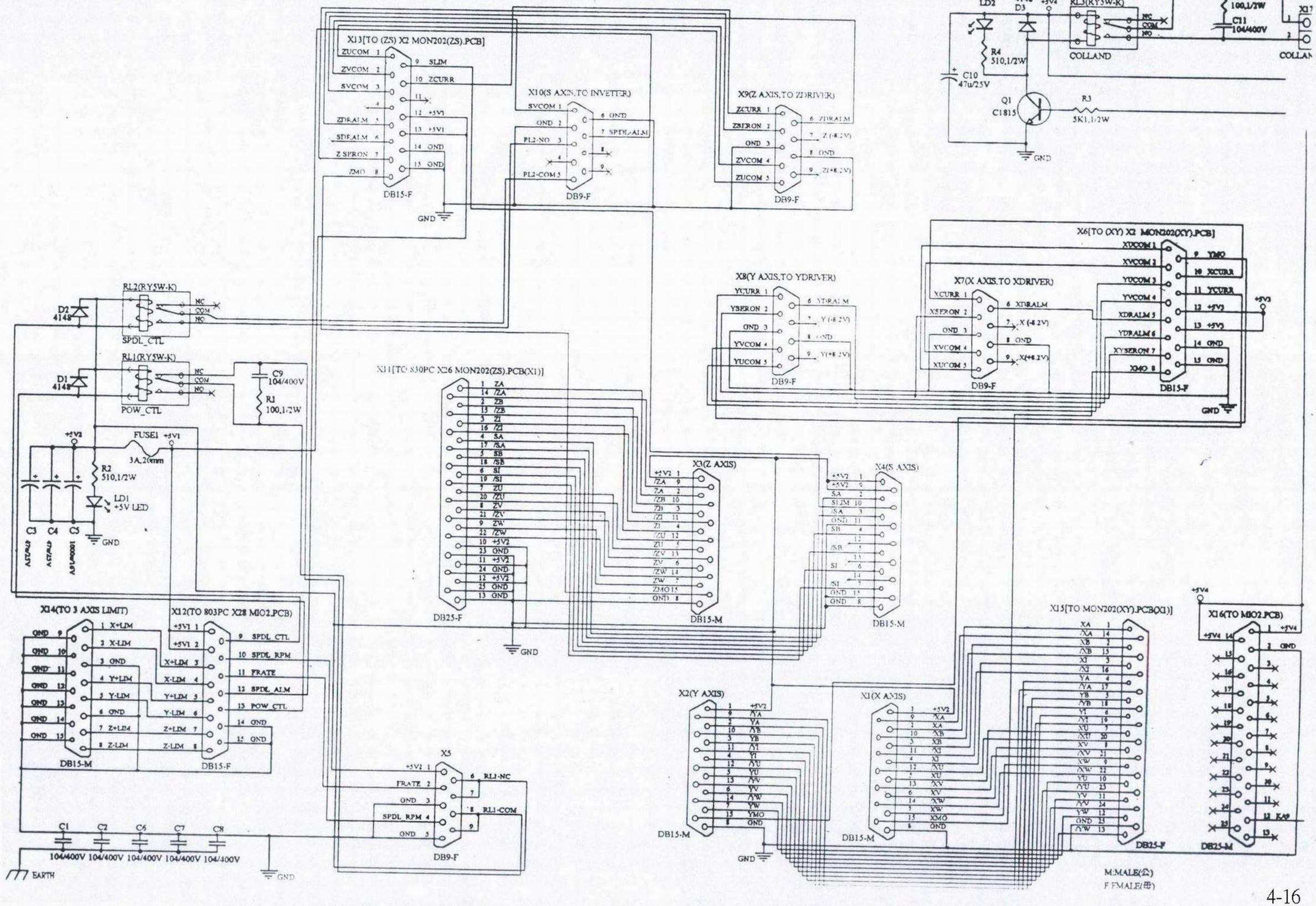
DB25-F


X5
1 9
8 16
TO MIIOPCB (X2)
X4
+5V
0V
0V
+12
FROM PC POWER
1 14
13 26
X3
TO MIIOPCB (X1)
C15
IN
U12
C16
U11
C14
OUT
U10
C13
U9
C12
IN
U5
C8
DUT
U4
C6
U3
C3
U2
C2
U1
C17
U13
C18
U14
U15
VR2 VR1
R2
510
2K2
R5
R3
510
2K2
R4
Q1
Q2
SPDL_CTL
POW OFF
DB15-M
U16
C19
C20
10U
C21
FRATE
C22
10U
RPM
R6
R7
JP2
JP1
4M OSC
TP GND
MIO2.PCB
VER1.0 99/7
QC:
JOK
SPDL_ALM
ASO
AS1
SSO
SS1
STOP
RUN
H/J
R36
R31
R30
R23
R22
R15
PR9 10K
PR8 2K2
PR7 2K2
PR6 2K2
PR5 2K2
C23-C33
10u/50V
C34-C44
PR4 10K
PR3 4K7
4K7 PR2
PR1 10K
R1 10K
C7 10U
C5 10U
C4 10U
C11
U8
C10
U7
C9
U6
DB25-M
X2
X1
C1
10u

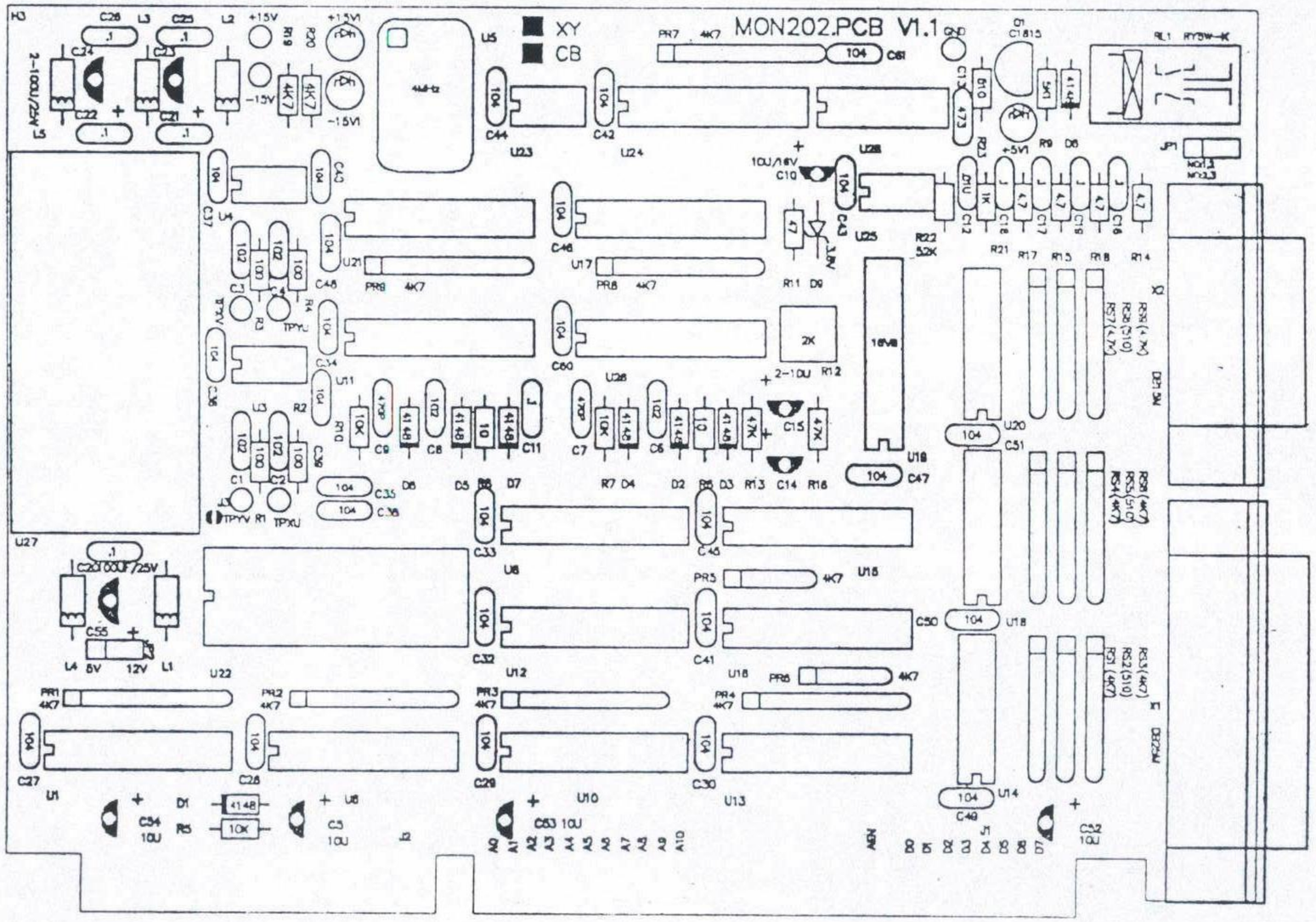

X6
18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
+12V (21)
+12V (20) (22)
+12V (20) DOOR LOCK SW (4)
+12V (20) UNCLAMP SW (5)
+12V (20) CLAMP LIMIT SW (7)
+12V (20) UNCLAMP LIMIT SW (9)
+12V (20) ATC IN LIMIT SW (11)
+12V (20) ATC OUT LIMIT SW (13)
+12V (20) (27)
+5V (28) ATC NEAR (BROWN) (15)
SIG (29) ATC NEAR (BLACK) (16)
0V ATC NEAR (BLUE) (17)
+12V (18)
(P10) INVETER RUN (2)
(P9) (1)
X5
+12V (1)
+12V (2)
+12V (3)
+12V (4)
+12V (5)
+12V (6)
+12V (7)
+12V (8)
+12V (9)
+12V (10)
+12V (11)
+12V (12)
+12V (13)
+12V (14)
+12V (15)
+12V (16)
AIR ALARM (17)
LUBRICATOR ALARM (18)
MTIO.PCB
99/6 VER1.0
■ MUST NOTE DIFFERENT TO ATCIO.PCB
INVERTER SETTING :
H3-01=1 (-10V~+10V)
H2-01=0 (RUN)
D1-09=1 (Hz)
X1
D25M-180
X4
AC0V 21
AC18V 11
DC24V 01
DC24V 06
DC0V 08
DC0V 07
0V 09
0V 05
■ 0V 04
■ +12V 03
+12V 02
+12V 01
(8) (19) AC19V
(+) (+) (-) (-) DC24V
X2
1C 1M 1D 2C 2M 2D 3M 3D 4M 4D 5M 5D 6M 6D 7M 7D 8M 8D
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
CR1 (-) (16) (11) ATC CW
CR2 (-) (16) (12) ATC CCW
CR3 (-) (8) ATC IN
CR4 (-) (9) UNCLAMP & SPDL AIR
CR5 (5) (10) LUBRICATOR
CR6 DOOR LOCK
CR7 (1) (4) SPINDLE BRAKE
CR8 AIR (M07)
C.N.C. M-COMMON D.N.D.
X3
9M 9D 10M 10D 11M 11D 12M 12D 13M 13D 14M 14D 15M 15D 16M 16D
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
CR9 (1) (3) COOLANT (M08)
CR10 (17) (18) (P11) INVETER (P7)
CR11
CR12
CR13
CR14
CR15
CR16 (M3) (M2) ALARM LAMP


TRANSIN.PCB
V1.0
CTEK CO.,LTD
2001/11
TO INVETER
TO ZDRIVER
TO YDRIVER
TO XDRIVER
TO MON202(XY).PCB (XY) X2
TO MON202(XY).PCB (X1)
TO M102.PCB
X17
X16
X15
X6
X7
X1
X8
X2
X9
X3
X10
X4
X5
X13
X14
X12
X11
CTEK
IDNO:
LED1
+5V LED
FUSE1
3A 20MM
RL1
RL2
RY5W-K
SPOL_CTL
PCW_CTL
TO 3 AXIS LIMIT
TO 803PC X28 M102.PCB
TO 803PC X26 MON202(ZS).PCB (X1)
MON202(ZS).PCB TO (ZS) X2
QC.

TRANSIN.PCB(V1.0)



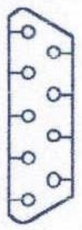
COMPONENT SILKSCREEN



RESET SW

SHORT ○ ○ RES-OUT
OVER-CURR ○ ○ OVER VOLT
POWER ○ ○ OVER TEMP

X1



U COM
V COM
GND
SERON
CURR OUT

+8.2V
GND
-8.2V
ALARM OUT

TB1

U
V
W
⏚
⏚
AC 0V
AC 220V

DRSIN

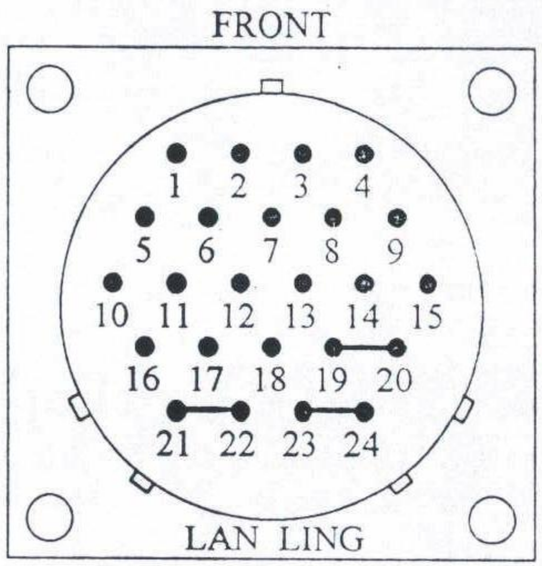
AC MOTOR

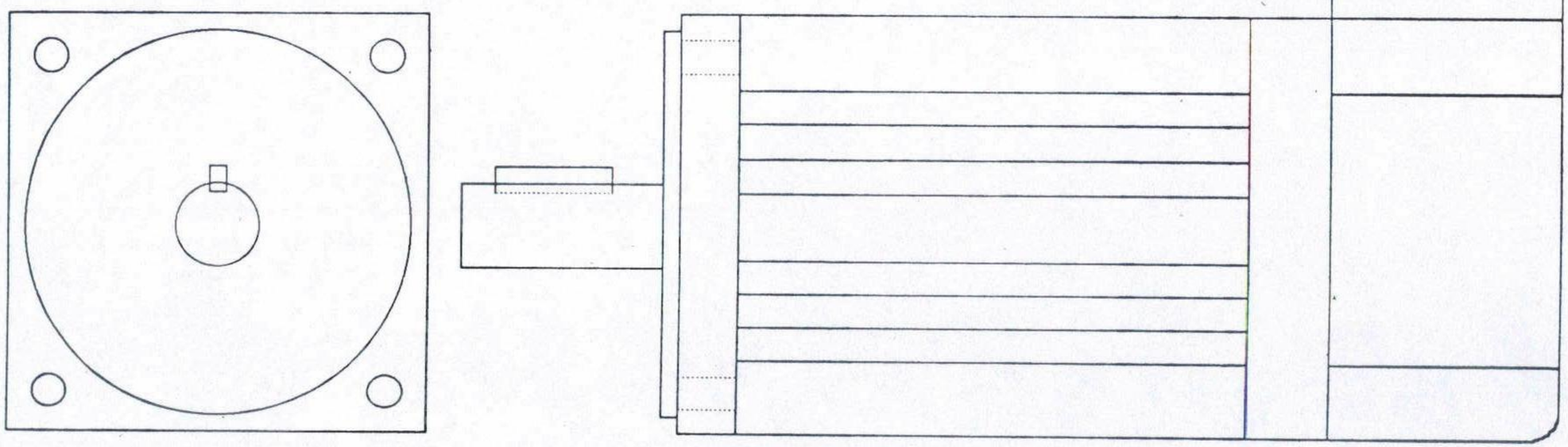
ENCODER

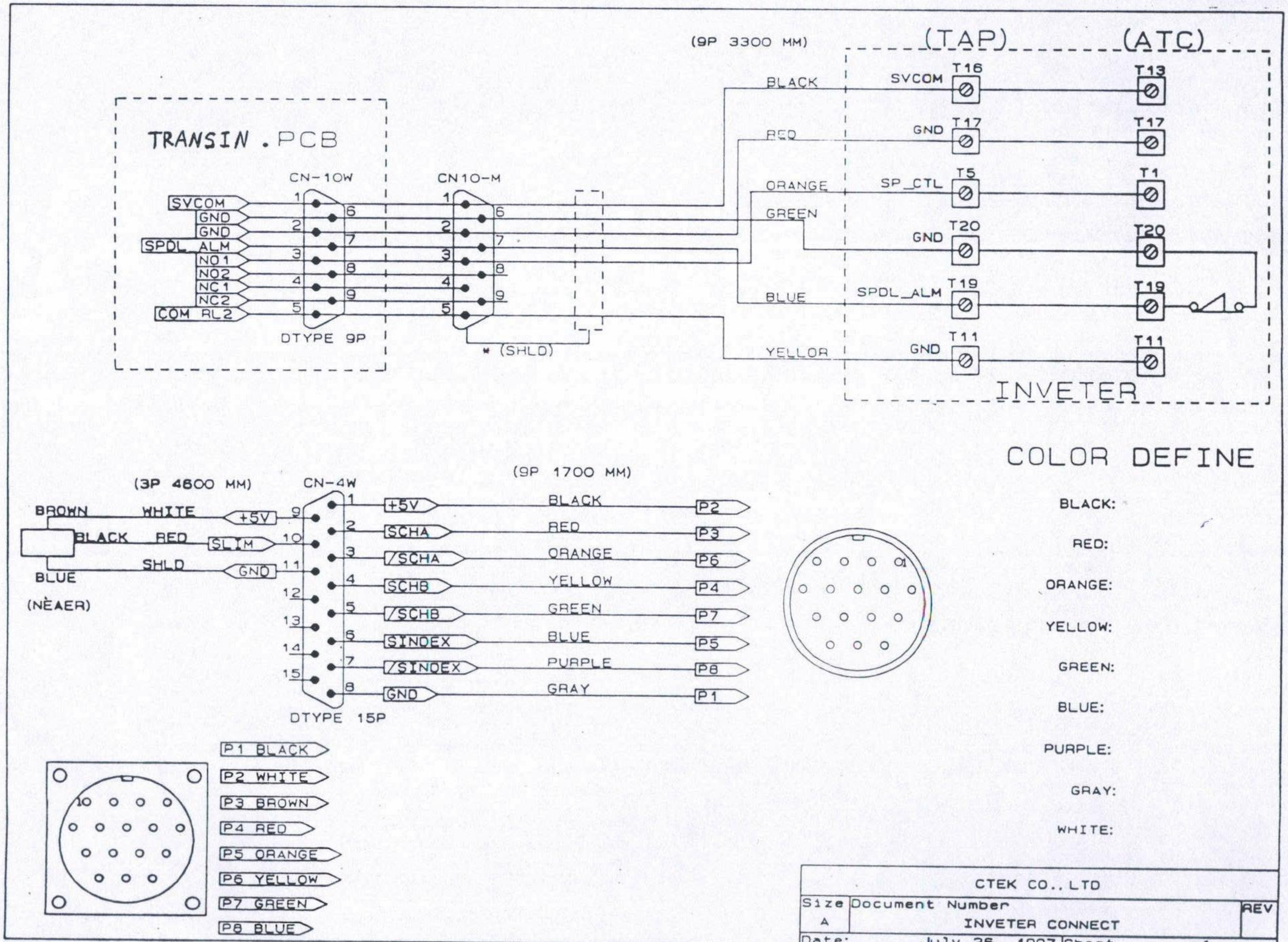
P1:+5V
P2:0V
P3:A
P4:/A
P5:B
P6:/B
P7:I
P8:/I
P9:U
P10:/U
P11:V
P12:/V
P13:W
P14:/W

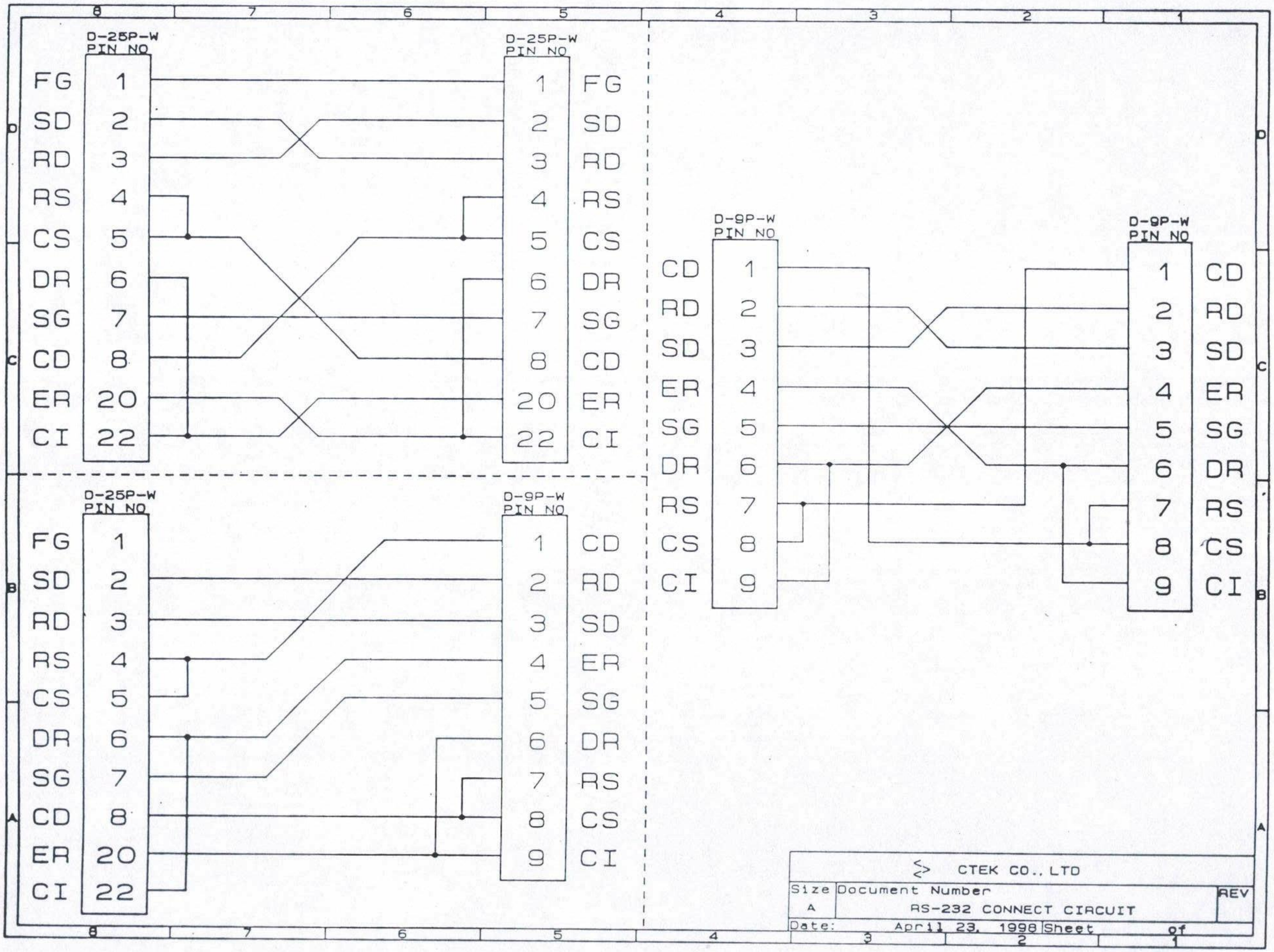
THERMAL POWER

P15:NOT USE
P16:0V
P17:THERMER
P18:GND
P19,P20:U
P21,P22:V
P23,P24:W

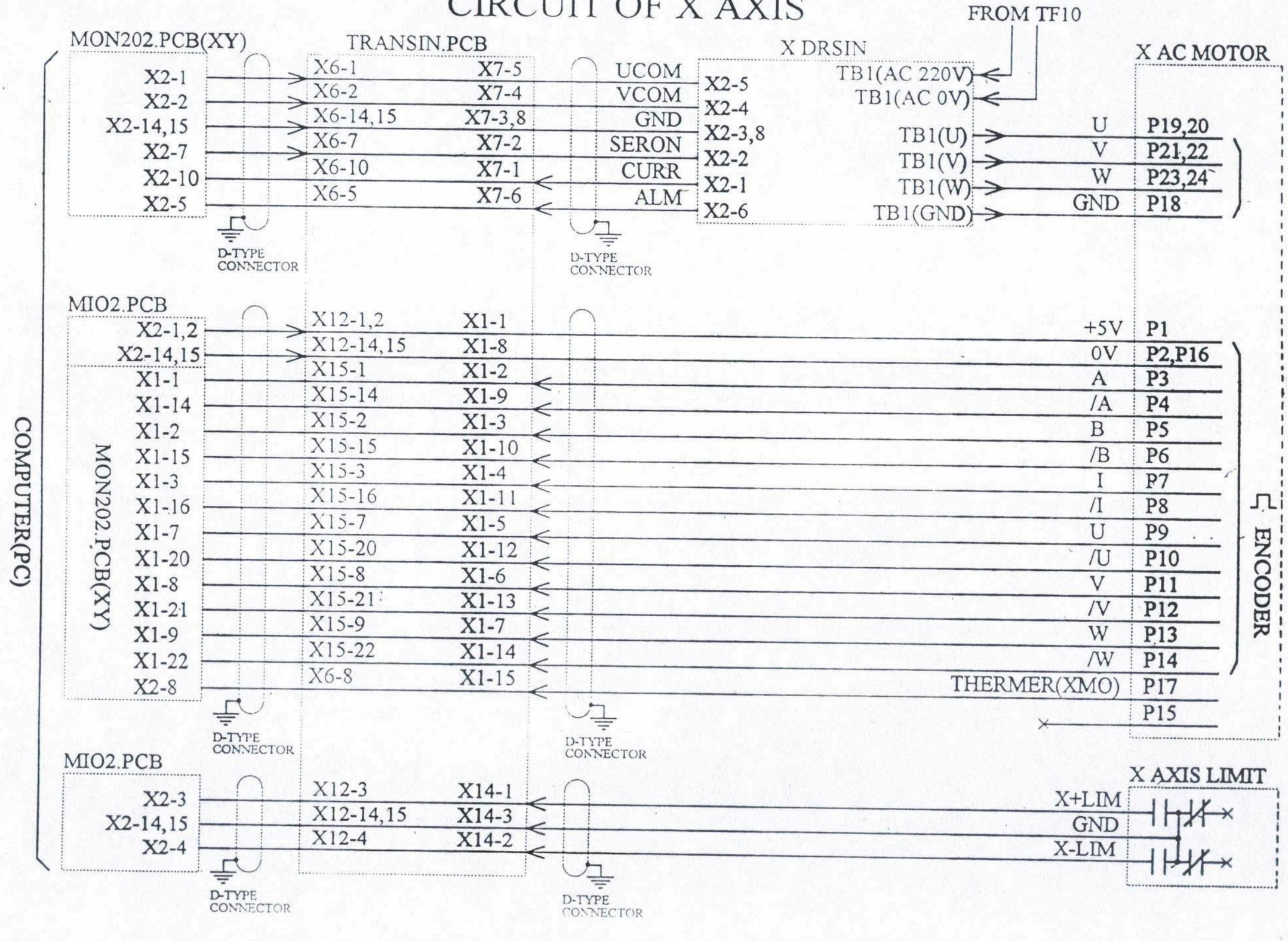




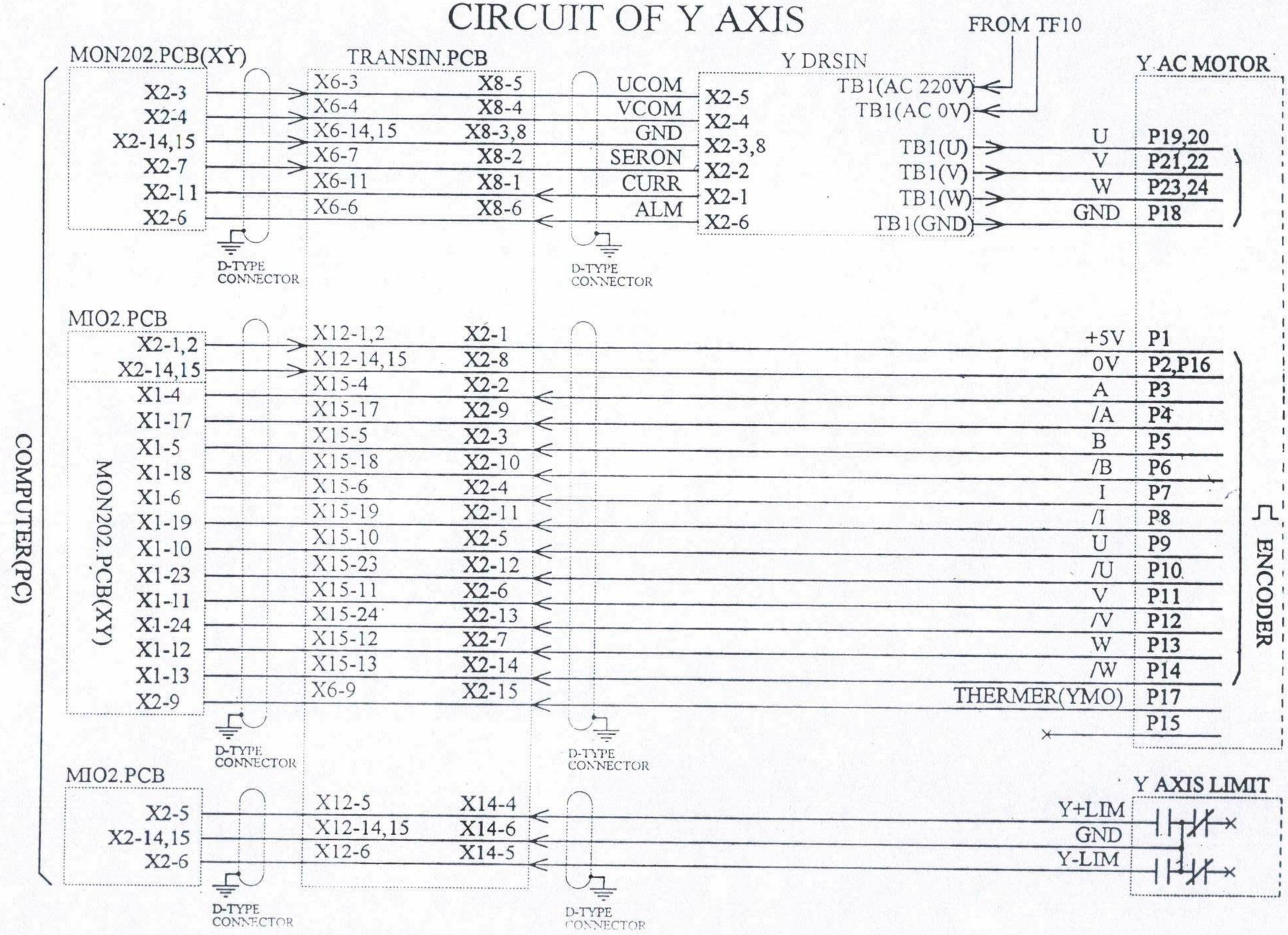

(9P 3300 MM)
(TAP)
(ATC)
TRANSIN . PCB
CN-10W
CN10-M
SVCOM
GND
GND
SPDL_ALM
NO1
NO2
NC1
NC2
COM RL2
DTYPE 9P
* (SHLD)
BLACK
RED
ORANGE
GREEN
BLUE
YELLOR
SVCOM T16
GND T17
SP_CTL T5
GND T20
SPDL_ALM T19
GND T11
T13
T17
T1
T20
T19
T11
INVETER
(3P 4600 MM)
CN-4W
(9P 1700 MM)
BROWN
WHITE
+5V
BLACK
RED
SLIM
SHLD
GND
BLUE
(NEAER)
+5V
SCHA
/SCHA
SCHB
/SCHB
SINOEX
/SINOEX
GND
BLACK
RED
ORANGE
YELLOW
GREEN
BLUE
PURPLE
GRAY
P2
P3
P6
P4
P7
P5
P8
P1
DTYPE 15P
P1 BLACK
P2 WHITE
P3 BROWN
P4 RED
P5 ORANGE
P6 YELLOW
P7 GREEN
P8 BLUE
COLOR DEFINE
BLACK:
RED:
ORANGE:
YELLOW:
GREEN:
BLUE:
PURPLE:
GRAY:
WHITE:
CTEK CO., LTD
Size A
Document Number
INVETER CONNECT
REV
Date: July 26, 1997
Sheet of


D-25P-W PIN NO
FG 1
SD 2
RD 3
RS 4
CS 5
DR 6
SG 7
CD 8
ER 20
CI 22
D-25P-W PIN NO
1 FG
2 SD
3 RD
4 RS
5 CS
6 DR
7 SG
8 CD
20 ER
22 CI
D-25P-W PIN NO
FG 1
SD 2
RD 3
RS 4
CS 5
DR 6
SG 7
CD 8
ER 20
CI 22
D-9P-W PIN NO
1 CD
2 RD
3 SD
4 ER
5 SG
6 DR
7 RS
8 CS
9 CI
D-9P-W PIN NO
CD 1
RD 2
SD 3
ER 4
SG 5
DR 6
RS 7
CS 8
CI 9
D-9P-W PIN NO
1 CD
2 RD
3 SD
4 ER
5 SG
6 DR
7 RS
8 CS
9 CI
CTEK CO., LTD
Size A
Document Number
RS-232 CONNECT CIRCUIT
REV
Date: April 23, 1998
Sheet of

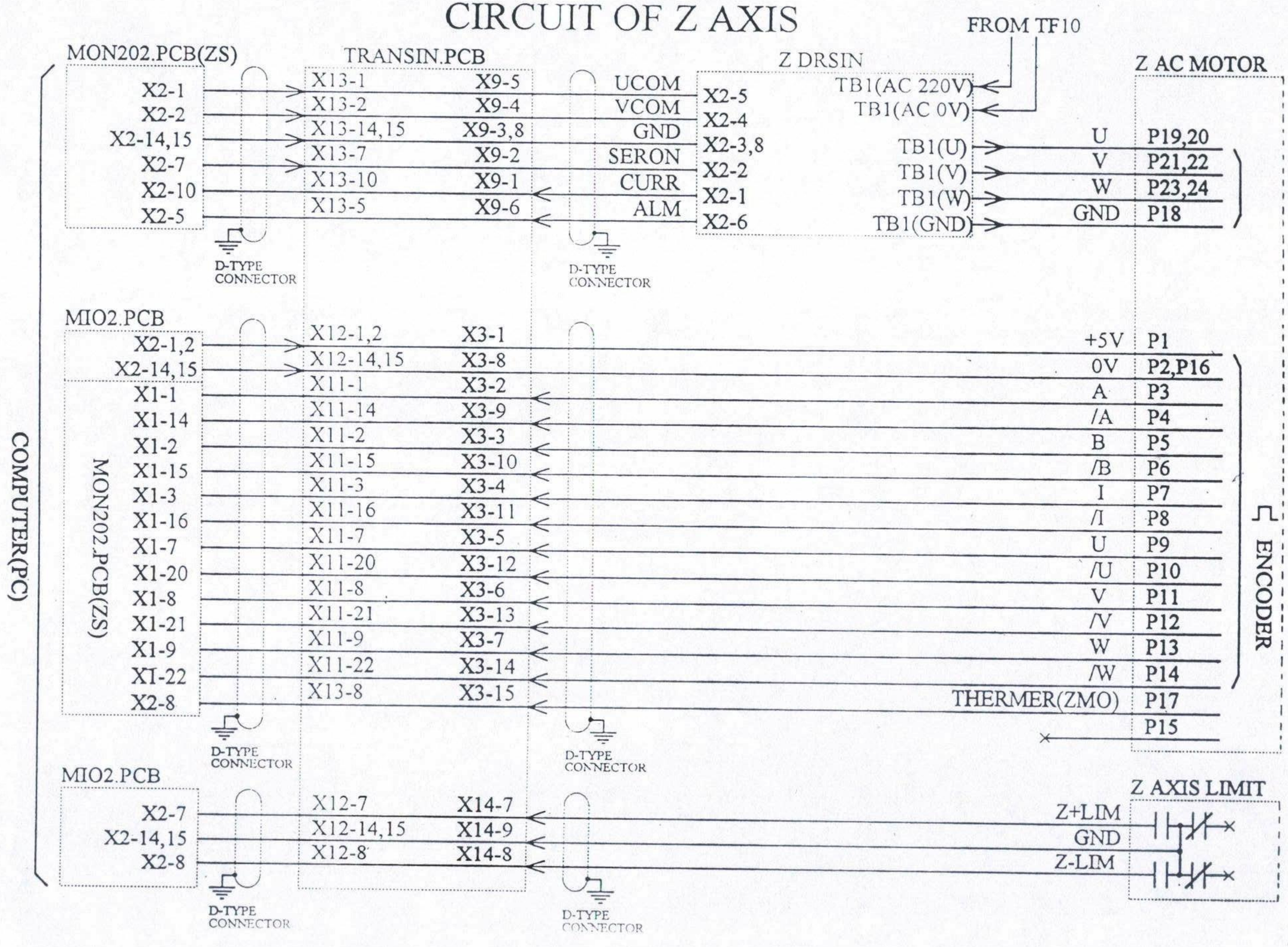
CIRCUIT OF X AXIS



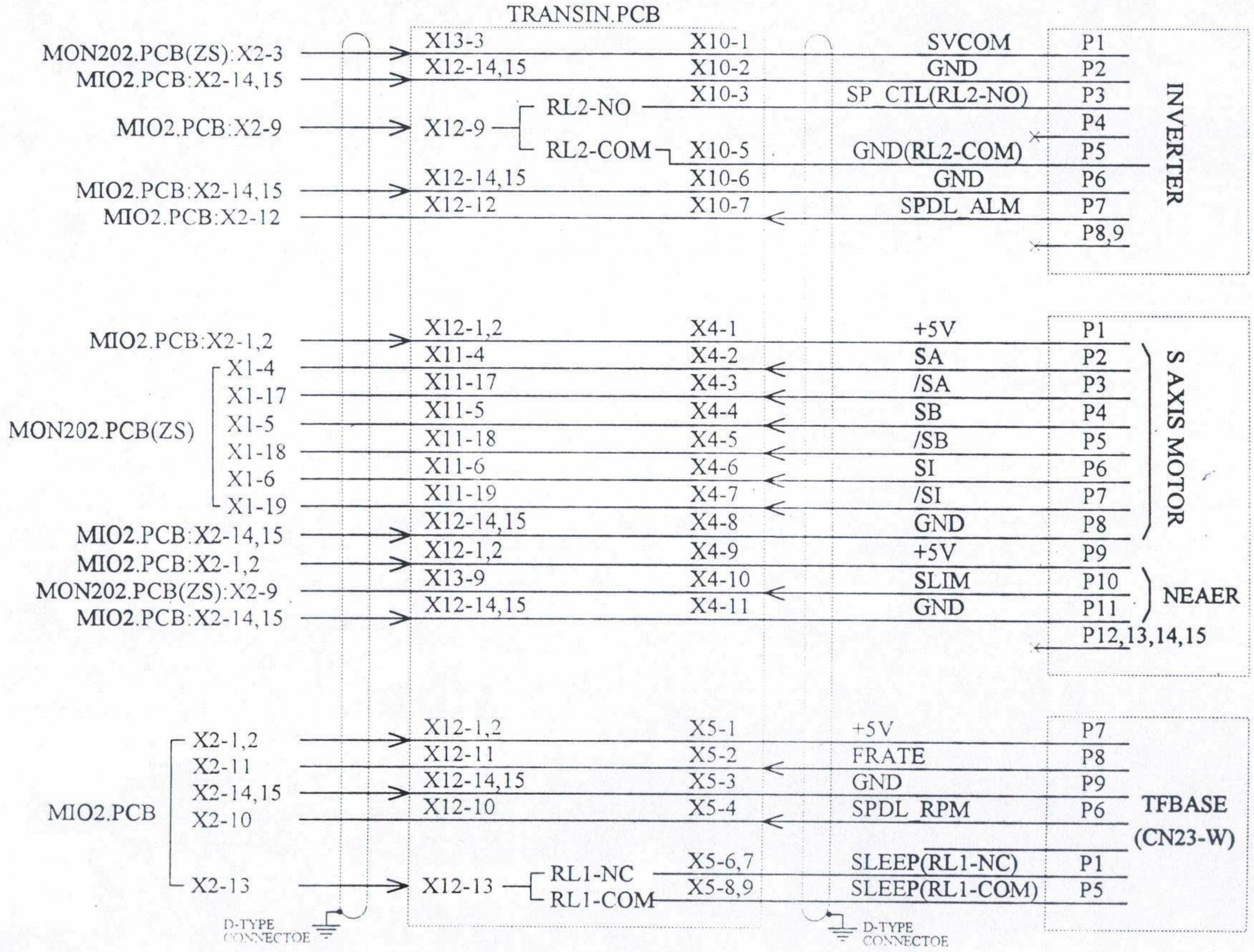
CIRCUIT OF Y AXIS



CIRCUIT OF Z AXIS

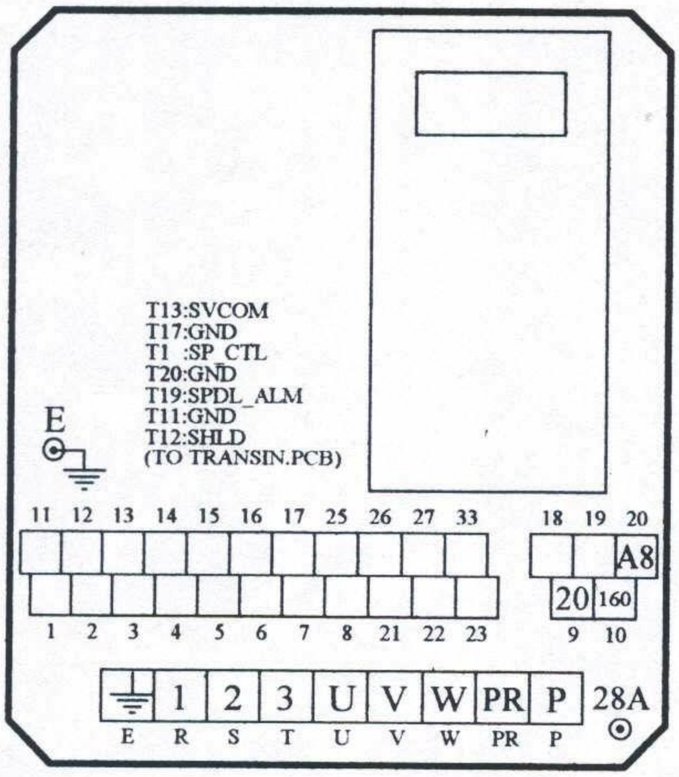


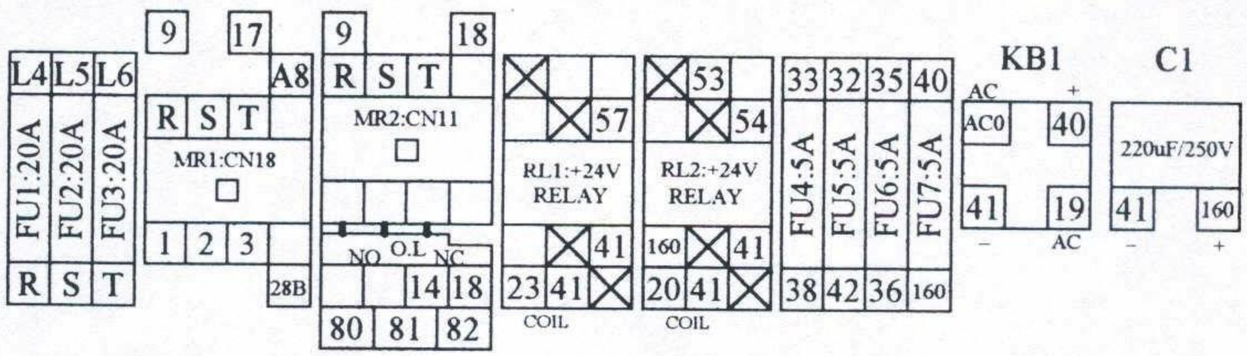
CIRCUIT OF S AXIS

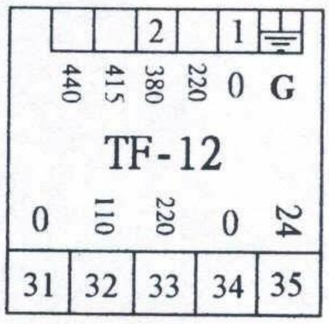


POWER PCB BASE

INVERTER





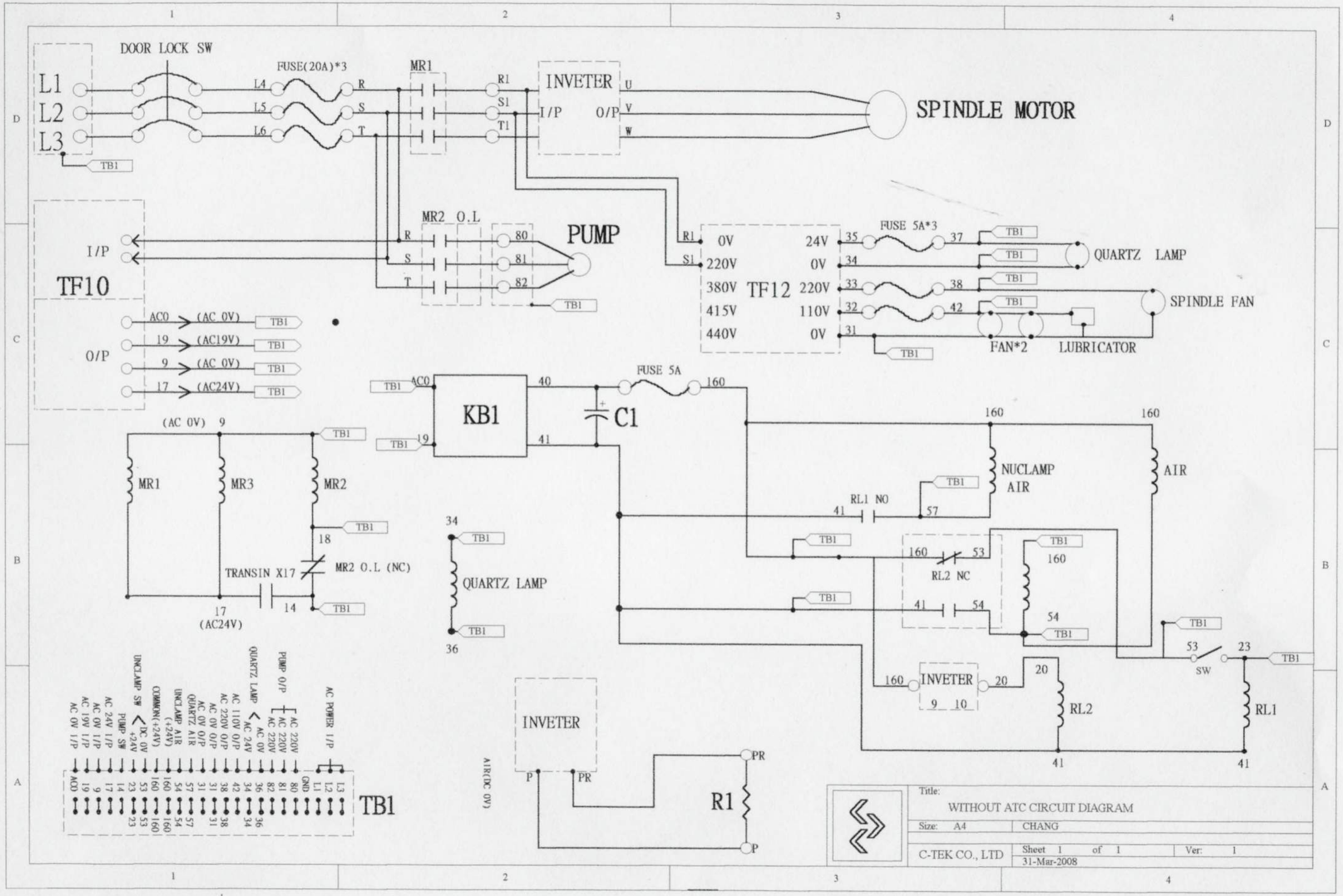


TB1

AC0	19	9	17		14	23	53	160	160	54	57	31		38	42		34	36	⏚	80	81	82	
AC0	19	9	17	17	14	23	53	160	160	54	57	31	31	38	42	42	34	36	⏚	80	81	82	

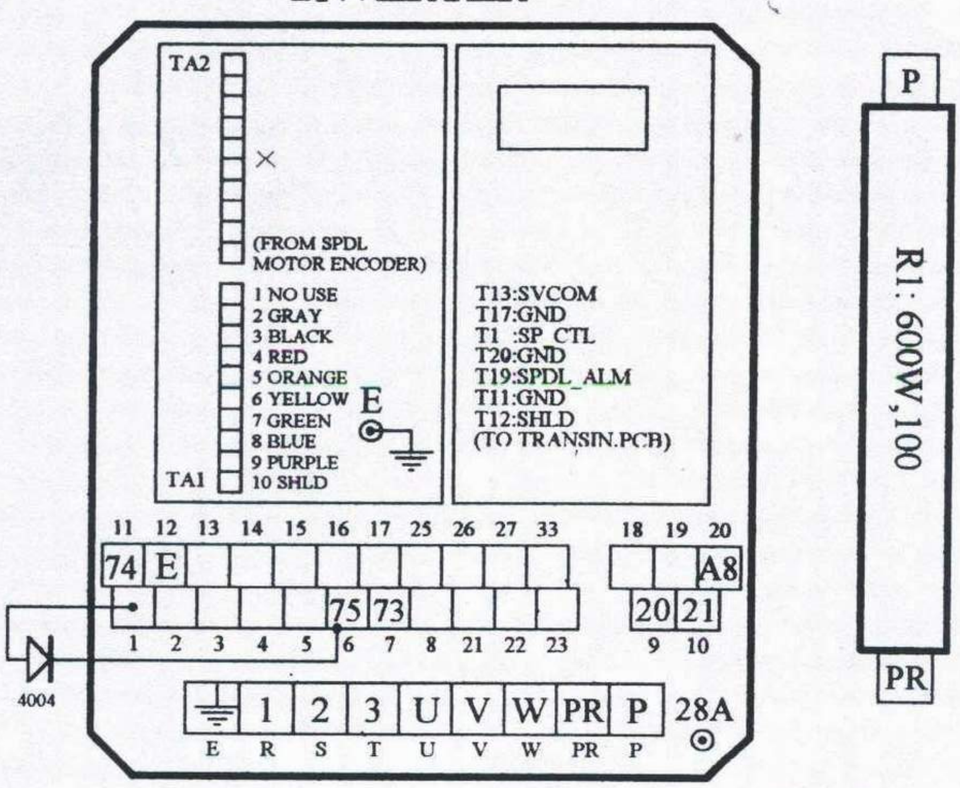
TB2

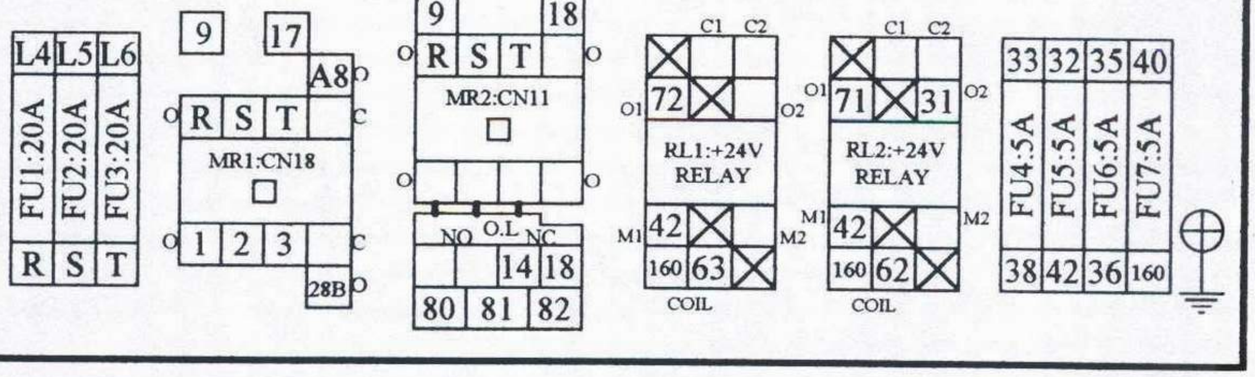
L3	L2	L1
L3	L2	L1

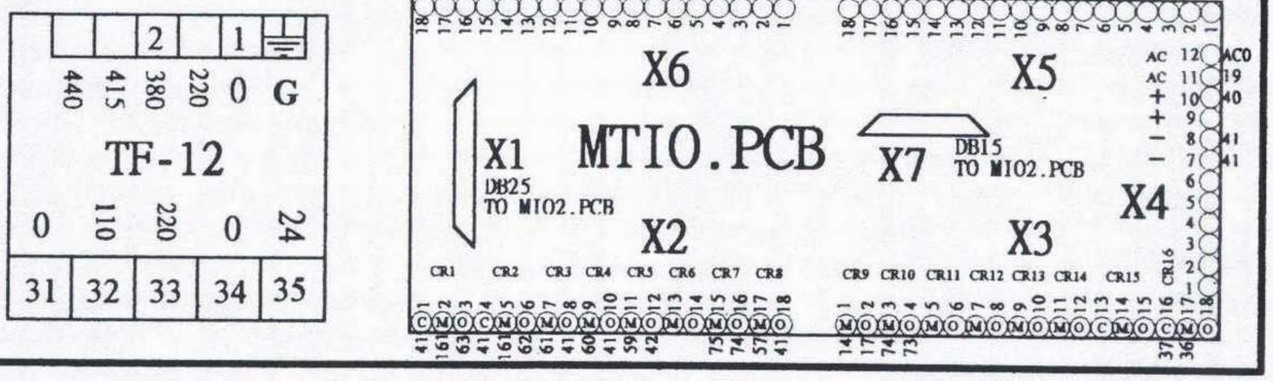

DOOR LOCK SW
L1
L2
L3
TB1
FUSE(20A)*3
L4
L5
L6
R
S
T
MR1
R1
S1
T1
INVETER
I/P
O/P
U
V
W
SPINDLE MOTOR
MR2 O.L
80
81
82
PUMP
TF10
I/P
O/P
AC0
(AC 0V)
19
(AC19V)
9
(AC 0V)
17
(AC24V)
0V
220V
380V
415V
440V
TF12
24V
0V
220V
110V
0V
FUSE 5A*3
35
37
34
33
38
32
42
31
QUARTZ LAMP
SPINDLE FAN
FAN*2
LUBRICATOR
KB1
40
FUSE 5A
160
C1
41
MR1
MR3
MR2
18
TRANSIN X17
MR2 O.L (NC)
14
QUARTZ LAMP
34
36
NUCLAMP
AIR
AIR
RL1 NO
57
RL2 NC
53
54
INVETER
20
RL2
RL1
SW
23
AIR(DC 0V)
PR
P
R1
AC 0V I/P
AC 19V I/P
AC 0V I/P
AC 24V I/P
PUMP SW
UNCLAMP SW
COMMON(+24V)
UNCLAMP AIR (+24V)
QUARTZ AIR
AC 0V O/P
AC 220V O/P
AC 110V O/P
QUARTZ LAMP
PUMP O/P
AC POWER I/P
GND
TB1
Title:
WITHOUT ATC CIRCUIT DIAGRAM
Size: A4
CHANG
C-TEK CO., LTD
Sheet 1 of 1
Ver: 1
31-Mar-2008

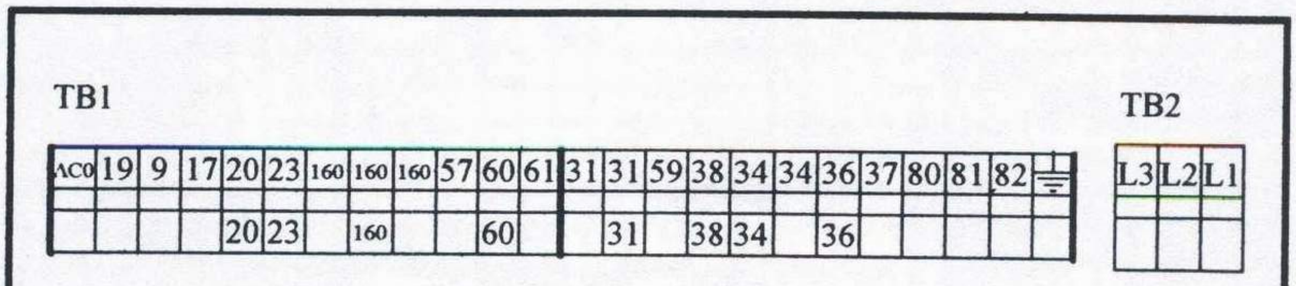
POWERBASE(ATC)

INVERTER

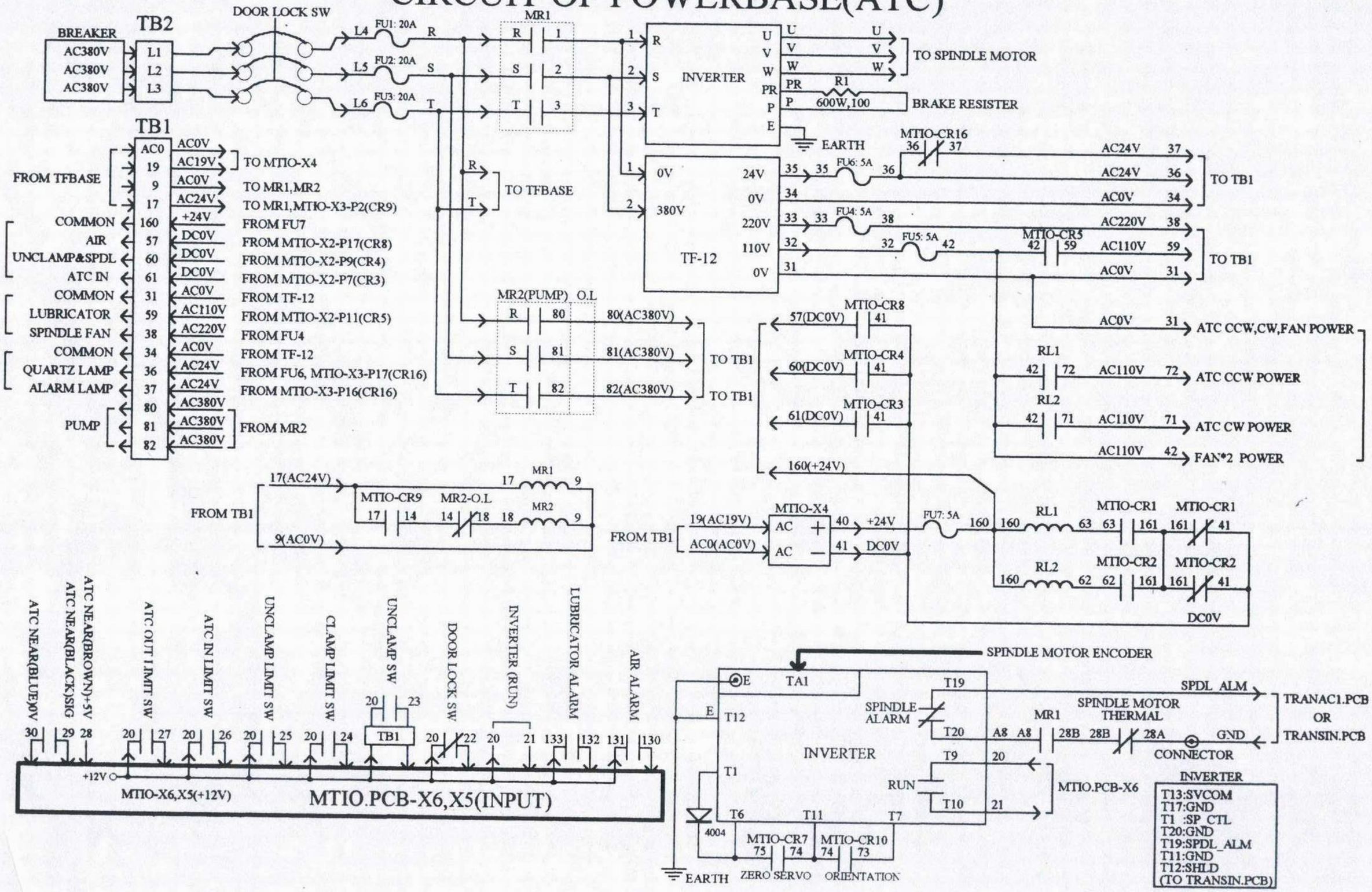








CIRCUIT OF POWERBASE(ATC)



INVERTER

P

R1:800W75

PR

E(G) ML22 | FM | AC | AM | P1 | P2 | SC

SC 74 | A1 ML22 | A2 | +V | AC ML22

S1 ML22 | S2 | S3 3 | S4 | S5 | S6 75 | S7 73

1N4004

MP | 1G

ML22: MA | MB | MC A8 | M1 20 | M2 160 | E

28A ML22

R | S | T | (-) | (+1) | (+2) | (+3) | U | V | W

R1 | S1 | T1 | SHORT

Title: POWERBASE ATC DISTRIBUTE DIAGRAM (C AXIS + RL3)

Size: A4 | CHANG

C-TEK CO., LTD | Sheet 1 of 1 | Ver: 1 | 31-Mar-2008

L4 L5 L6 | FU1:20A FU2:20A FU3:20A | R S T

9 | 17 | A8 | R S T | MR1:CN18 | R1 S1 T1 | 28B

9 | 18 | R S T | MR2:CN11 | NO O.L NC | 14 18 | 80 81 82

72 | RL1:+24V RELAY | 42 | 160 63

71 31 | RL2:+24V RELAY | 42 | 160 62

109 | RL3:+24V RELAY | 110 | 160 159

33 32 35 40 | FU4:5A FU5:5A FU6:5A FU7:5A | 38 42 36 160

C AXIS LIMT — 41

T1 | R1 | 440 415 380 220 0 G | TF-12 | 0 110 220 0 22 | 31 32 33 34 35

X6 | X5 | X1 MTIO.PCB | DB25 TO MI02.PCB | X7 DB15 TO MI02.PCB | X4 | X2 | X3

AC 12 AC0 | AC 11 19 | + 10 40 | + 9 | - 8 41 | - 7 41 | 6 | 5 | 4 | 3 | 2 | 1

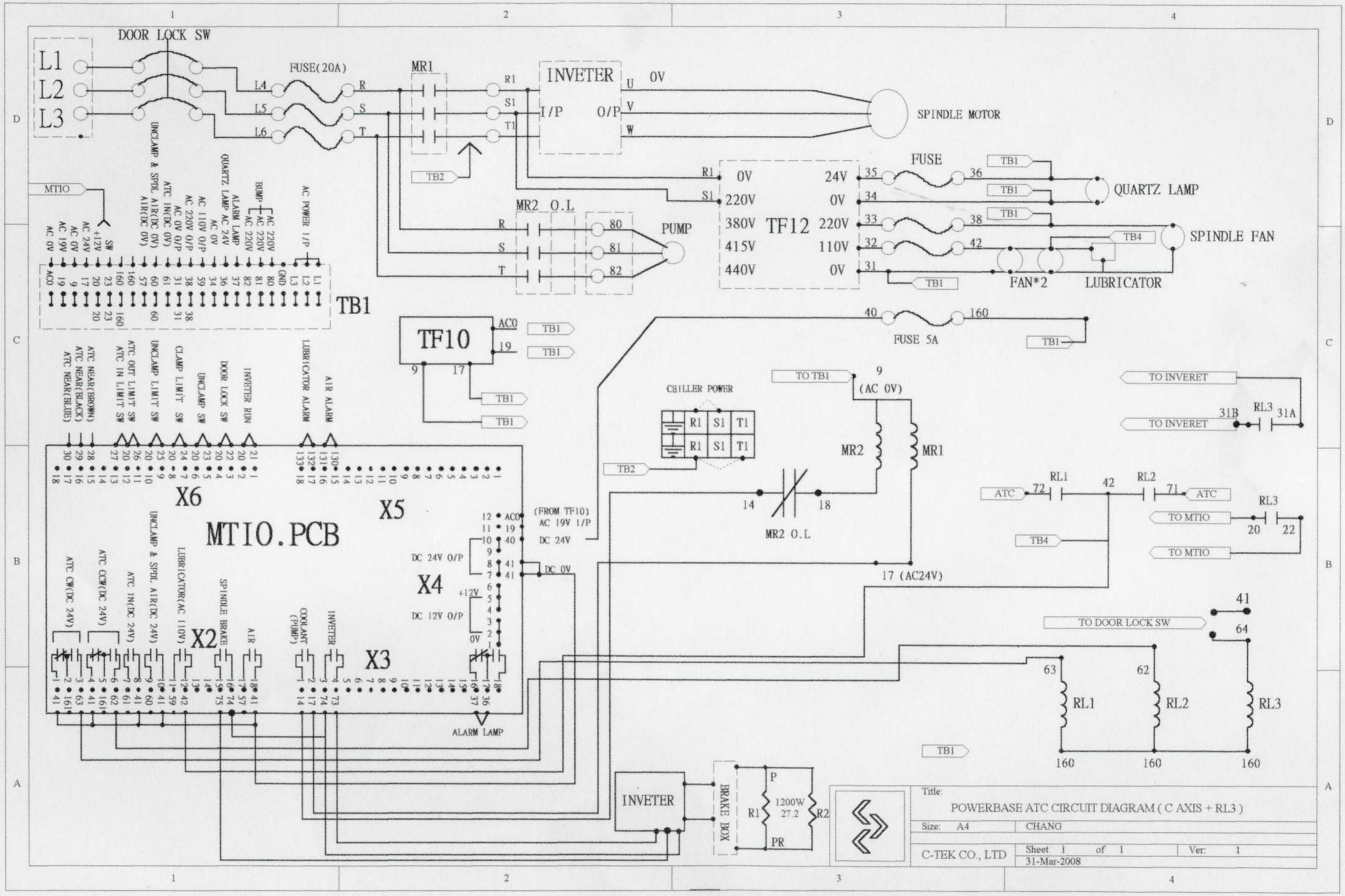
CR1 CR2 CR3 CR4 CR5 CR6 CR7 CR8 | CR9 CR10 CR11 CR12 CR13 CR14 CR15 CR16

TB1

AC0	19	9	17	20	23	160	160	160	57	60	61	31	31	59	38	34	34	36	37	80	81	82	⏚
				20	23		160			60			31		38	34		36					

TB2

L3	L2	L1


DOOR LOCK SW
L1
L2
L3
FUSE(20A)
L4
L5
L6
MR1
R1
S1
T1
INVETER
I/P
O/P
U
V
W
0V
SPINDLE MOTOR
TB2
MR2 O.L
80
81
82
PUMP
R1
S1
0V
220V
380V
415V
440V
TF12
24V
0V
220V
110V
0V
FUSE
35
36
34
33
38
32
42
31
TB1
QUARTZ LAMP
TB4
SPINDLE FAN
FAN*2
LUBRICATOR
MTIO
AC 0V
AC 19V
AC 0V
AC 24V
SW
+12V
ATC IN(DC 0V)
AIR(DC 0V)
UNCLAMP & SPDL AIR(DC 0V)
AC 0V O/P
AC 220V O/P
AC 110V O/P
AC 0V
ALARM LAMP AC 24V
QUARTZ LAMP AC 220V
BUMP
AC 220V
AC 220V
AC POWER I/P
GND
L3
L2
L1
TB1
TF10
AC0
19
9
17
TB1
FUSE 5A
40
160
TO TB1
9
(AC 0V)
CHILLER POWER
R1
S1
T1
TB2
MR2
MR1
14
18
MR2 O.L
17 (AC24V)
TO INVERET
31B
RL3
31A
TO INVERET
ATC
72
RL1
42
RL2
71
ATC
RL3
TO MTIO
20
22
TO MTIO
TB4
41
TO DOOR LOCK SW
64
63
62
RL1
RL2
RL3
160
160
160
TB1
ATC NEAR(BROWN)
ATC NEAR(BLACK)
ATC NEAR(BLUE)
ATC OUT LIMIT SW
ATC IN LIMIT SW
UNCLAMP LIMIT SW
CLAMP LIMIT SW
UNCLAMP SW
DOOR LOCK SW
INVERTER RUN
LUBRICATOR ALARM
AIR ALARM
X6
X5
MTIO.PCB
ATC CW(DC 24V)
ATC CCW(DC 24V)
ATC IN(DC 24V)
UNCLAMP & SPDL AIR(DC 24V)
LUBRICATOR(AC 110V)
SPINDLE BRAKE
AIR
COOLANT (PUMP)
INVERTER
X2
X3
X4
(FROM TF10)
AC 19V I/P
DC 24V
DC 0V
DC 24V O/P
+12V
DC 12V O/P
0V
ALARM LAMP
INVETER
BRAKE BOX
P
R1
1200W
27.2
R2
PR
Title:
POWERBASE ATC CIRCUIT DIAGRAM (C AXIS + RL3)
Size: A4
CHANG
C-TEK CO., LTD
Sheet 1 of 1
Ver: 1
31-Mar-2008

B2 800W,20 B1

INVERTER

E(G) FM AC AM P1 P2 SC
SC 74 A1 A2 +V AC
S1 S2 S3 3 S4 S5 S6 S7
MP R2 R3 S3 S4 IG
MA MB MC A8
M1 20 M2 160 E
28A
R1 S1 T1 B1 B2 U V W
SHORT

L4 L5 L6 32A 32A 32A R S T

CN-35: 9 17 R S T A8 NO / R1 S1 T1 A9 NO
CN-35: 9 A0 U V W 28B NO / A9 NO / 17 A0 NC / U1 V1 W1
CN-11: 9 18 R2 S2 T2 / 14 18 NC / 80 81 82
Relay +24V: 57 / 160 41 / 23 41
Relay +24V: 53 54 / 160 41 / 20 41

L4 L5 L6 R1 T1
2A 2A 2A 4A 4A
R2 S2 T2 83 84

84 83 ⏚
440 415 380 220 0 G
TF-12
0 110 220 0 22
31 32 33 34 35

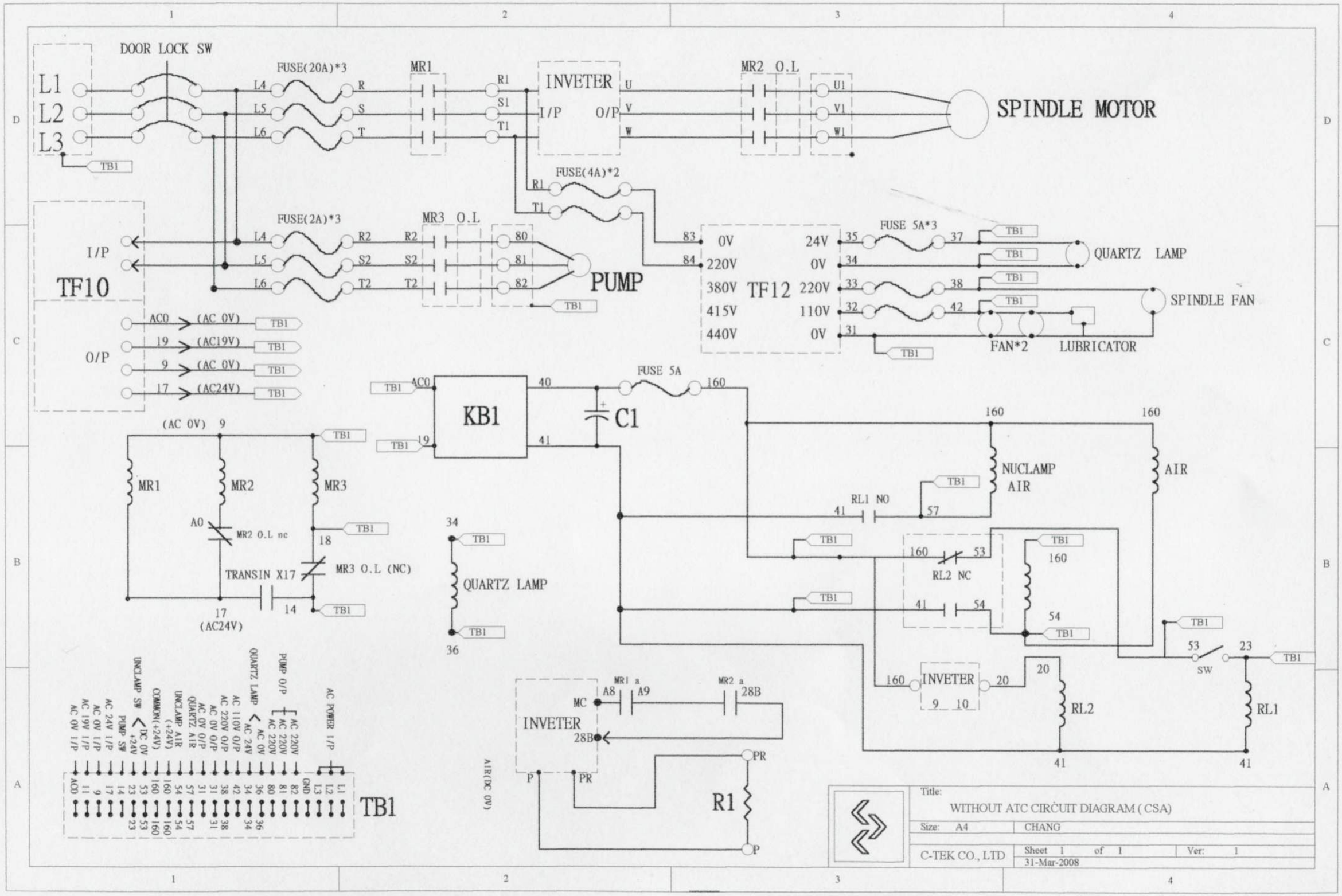
AC0 40
AC − + AC
41 11

220uF/250V
41 160

33 32 35 40
2A 4A 6A 6A
38 42 36 160

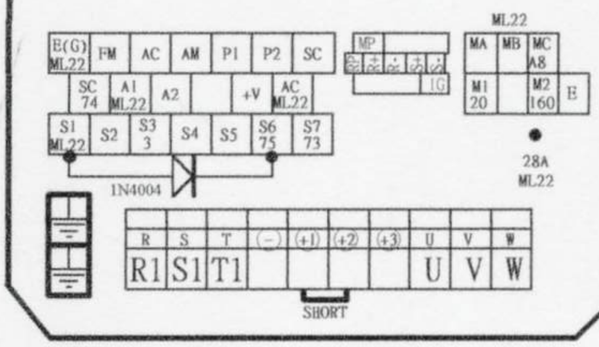
AC0 11 9 17 17 14 23 53 160 160 54 57 31 31 38 42 42 34 36 80 81 82 E L3 L2 L1

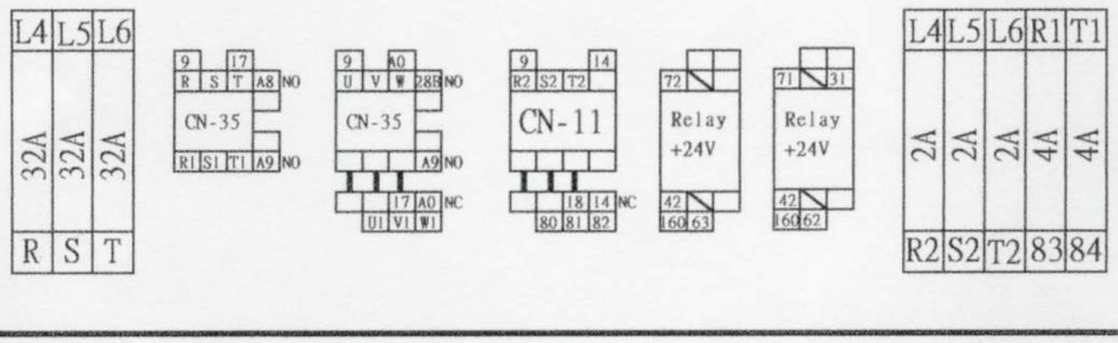
Title: WITHOUT ATC DISTRBUTE DIAGRAM (CSA)
Size: A4 | CHANG
C-TEK CO., LTD | Sheet 1 of 1 | Ver: 2 | 31-Mar-2008

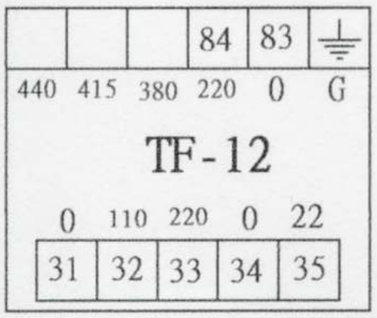

DOOR LOCK SW
L1
L2
L3
TB1
FUSE(20A)*3
L4
L5
L6
R
S
T
MR1
R1
S1
T1
INVETER
I/P
O/P
U
V
W
MR2 O.L
U1
V1
W1
SPINDLE MOTOR
FUSE(4A)*2
R1
T1
FUSE(2A)*3
MR3 O.L
R2
S2
T2
80
81
82
PUMP
I/P
TF10
O/P
AC0
(AC 0V)
19
(AC19V)
9
(AC 0V)
17
(AC24V)
83
84
0V
220V
380V
415V
440V
TF12
24V
0V
220V
110V
0V
35
34
33
32
31
FUSE 5A*3
37
38
42
QUARTZ LAMP
SPINDLE FAN
FAN*2
LUBRICATOR
TB1
AC0
KB1
40
41
FUSE 5A
160
C1
19
(AC 0V) 9
MR1
MR2
MR3
A0
MR2 O.L nc
18
TRANSIN X17
MR3 O.L (NC)
14
17
(AC24V)
34
QUARTZ LAMP
36
MR1 a
A8
A9
MR2 a
28B
MC
INVETER
28B
P
PR
R1
AIR(DC 0V)
NUCLAMP
AIR
AIR
RL1 NO
57
RL2 NC
53
54
INVETER
9
10
20
RL2
RL1
SW
23
AC 0V I/P
AC 19V I/P
AC 0V I/P
AC 24V I/P
PUMP S/W
UNCLAMP S/W
COMMON(+24V)
UNCLAMP AIR (+24V)
QUARTZ AIR
AC 0V O/P
AC 220V O/P
AC 110V O/P
QUARTZ LAMP
PUMP O/P
AC POWER I/P
GND
L3
L2
L1
TB1
Title:
WITHOUT ATC CIRCUIT DIAGRAM (CSA)
Size: A4
CHANG
C-TEK CO., LTD
Sheet 1 of 1
Ver: 1
31-Mar-2008

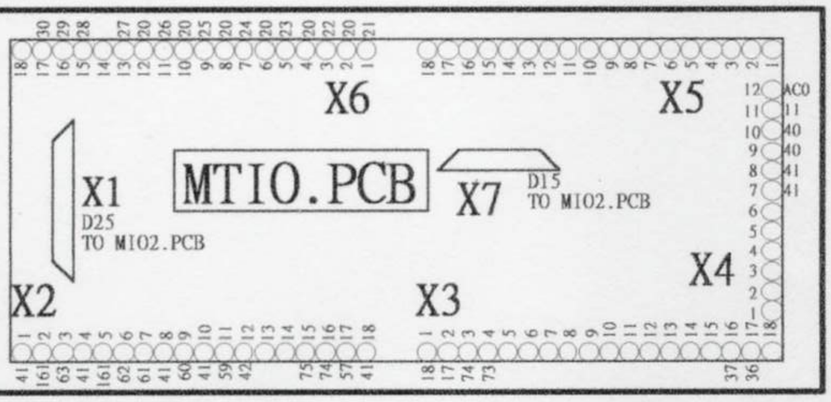
B2 800W,20 B1

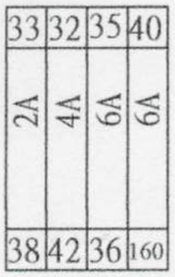
INVERTER

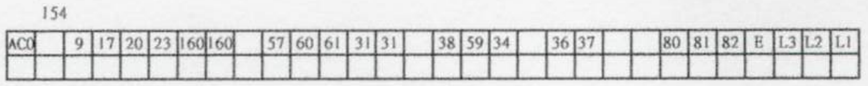






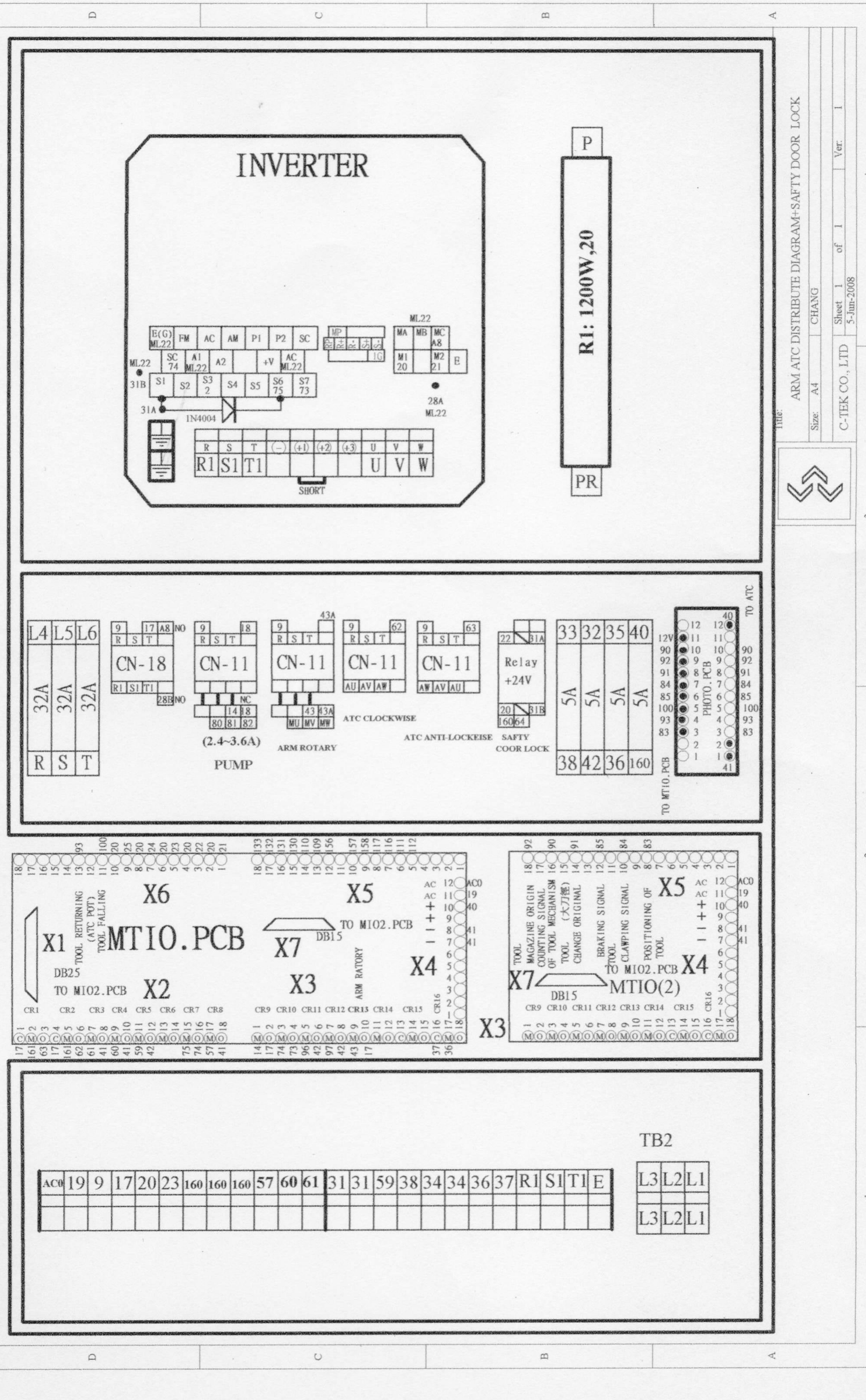


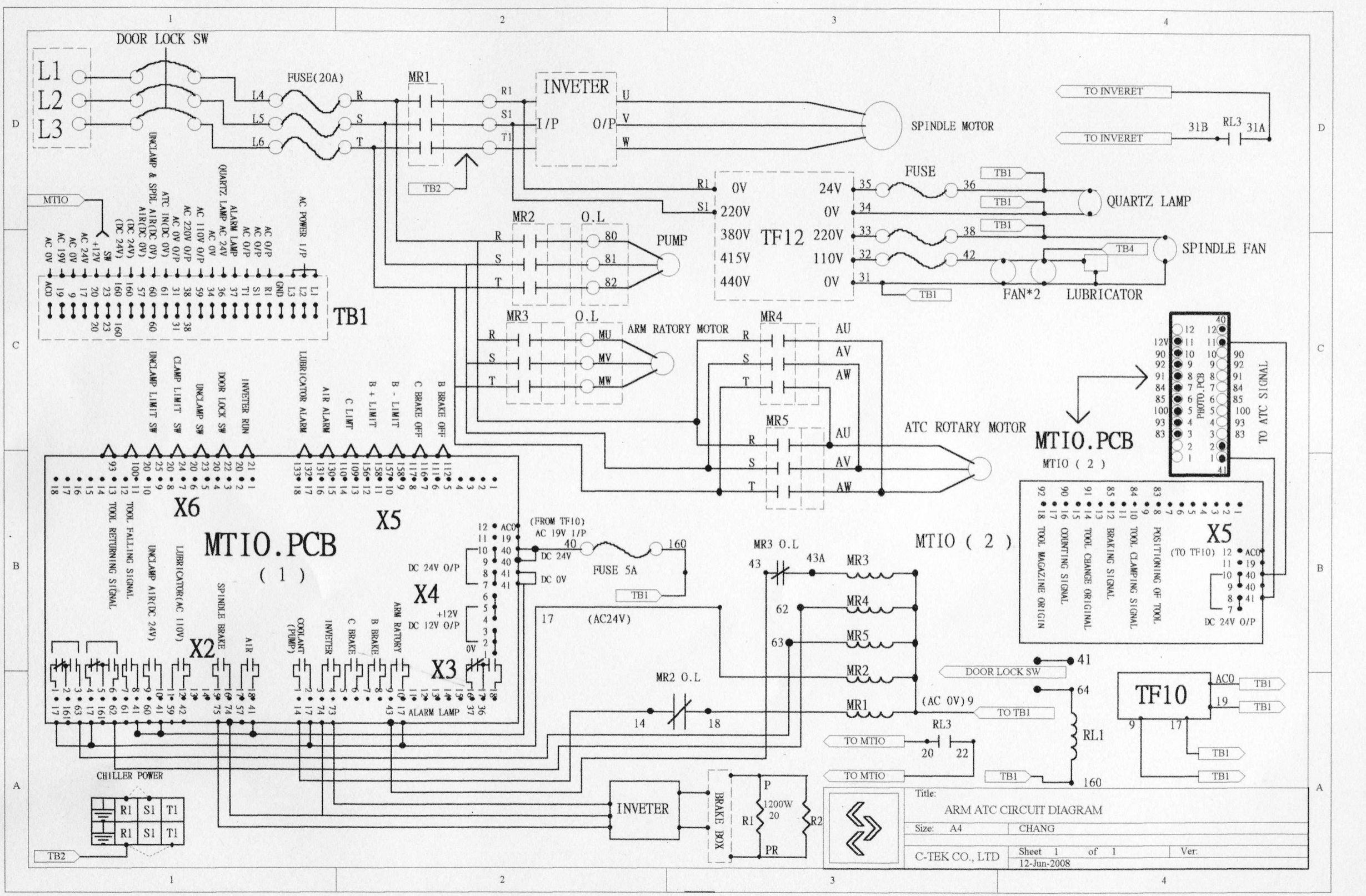




Title: ATC DISTRIBUTE DIAGRAM (CSA)
Size: A4 CHANG
C-TEK CO., LTD Sheet 1 of 1 Ver: 2A
31-Mar-2008

DOOR LOCK SW
L1
L2
L3
FUSE(20A)
L4
L5
L6
R
S
T
MR1
R1
S1
T1
INVETER
I/P
O/P
U
V
W
0V
MR2 O.L
U1
V1
W1
SPINDLE MOTOR
FUSE(2A)
R2
S2
T2
MR3 O.L
80
81
82
PUMP
R1
S1
0V
220V
380V
415V
440V
TF12
24V
0V
220V
110V
0V
FUSE
35
36
34
33
38
32
42
31
TB1
QUARTZ LAMP
TB4
SPINDLE FAN
FAN*2
LUBRICATOR
MTIO
AC 0V
AC 19V
AC 0V
AC 24V
+12V
SW
UNCLAMP AIR
AIR(DC 0V)
ATC IN
AC 220V O/P
AC 0V O/P
AC 110V O/P
AC 0V
QUARTZ LAMP
ALARM LAMP
BUMP
POWER I/P
GND
L3
L2
L1
TB1
TF10
AC0
19
9
17
11
FUSE 4A
40
160
FUSE 5A
CHILLER POWER
R1
S1
T1
TB2
TO TB1
9
(AC 0V)
MR3
MR2
MR1
14
18
MR3 O.L
A0
MR2 O.L nc
17 (AC24V)
TO INVERET
31B
RL3
31A
RL1
42
RL2
72
71
ATC
TO MTIO
20
22
TB4
41
TO DOOR LOCK SW
64
63
62
RL1
RL2
RL3
160
160
160
TB1
MR1 a
A8
A9
MR2 a
28B
MC 28B
INVETER
BRAKE BOX
P
R1
1200W
27.2
R2
PR
ATC NEAR(BROWN)
ATC NEAR(BLACK)
ATC NEAR(BLUE)
ATC OUT LIMIT SW
ATC IN LIMIT SW
UNCLAMP LIMIT SW
CLAMP LIMIT SW
UNCLAMP SW
DOOR LOCK SW
INVETER RUN
LUBRICATOR ALARM
AIR ALARM
X6
X5
MTIO.PCB
ATC CW(DC 24V)
ATC CCW(DC 24V)
ATC IN(DC 24V)
UNCLAMP & SPDL AIR(DC 24V)
LUBRICATOR(AC 110V)
SPINDLE BRAKE
AIR
COOLANT (PUMP)
INVETER
X2
X3
(FROM TF10)
AC 19V I/P
DC 24V
DC 0V
DC 24V O/P
DC 12V O/P
X4
+12V
0V
ALARM LAMP
Title:
ATC CIRCUIT DIAGRAM (CSA)
Size: A4
CHANG
C-TEK CO., LTD
Sheet 1 of 1
Ver: 1
31-Mar-2008


INVERTER
R1: 1200W,20
P
PR
E(G) ML22
FM
AC
AM
P1
P2
SC
MP
RP
R2
S2
S3
IG
ML22
MA
MB
MC A8
SC 74
A1 ML22
A2
+V
AC ML22
M1 20
M2 21
E
ML22 31B
S1
S2
S3 2
S4
S5
S6 75
S7 73
31A
1N4004
28A ML22
R
S
T
(-)
(+1)
(+2)
(+3)
U
V
W
R1
S1
T1
SHORT
L4 L5 L6
32A
R S T
CN-18
CN-11
CN-11
CN-11
CN-11
Relay +24V
33 32 35 40
5A
38 42 36 160
(2.4~3.6A)
PUMP
ARM ROTARY
ATC CLOCKWISE
ATC ANTI-LOCKEISE
SAFTY COOR LOCK
TO ATC
TO MTIO.PCB
PHOTO.PCB
X6
X5
X1
MTIO.PCB
X7
X4
X2
X3
DB25
DB15
TO MIO2.PCB
TOOL RETURNING (ATC POT)
TOOL FALLING
ARM RATORY
MTIO(2)
TOOL MAGAZINE ORIGIN COUNTING SIGNAL OF TOOL MECHANISM
TOOL (大刀座) CHANGE ORIGINAL
BRAKING SIGNAL TOOL
TO CLAWPING SIGNAL
POSITIONING OF TOOL
CR1 CR2 CR3 CR4 CR5 CR6 CR7 CR8 CR9 CR10 CR11 CR12 CR13 CR14 CR15 CR16
TB2
AC0 19 9 17 20 23 160 160 160 57 60 61 31 31 59 38 34 34 36 37 R1 S1 T1 E
L3 L2 L1
L3 L2 L1
Title: ARM ATC DISTRIBUTE DIAGRAM+SAFTY DOOR LOCK
Size: A4
CHANG
C-TEK CO., LTD
Sheet 1 of 1
Ver: 1
5-Jun-2008


DOOR LOCK SW
L1
L2
L3
FUSE(20A)
L4
L5
L6
R
S
T
MR1
R1
S1
T1
INVETER
I/P
O/P
U
V
W
SPINDLE MOTOR
TO INVERET
TO INVERET
31B
RL3
31A
TB2
MR2
O.L
80
81
82
PUMP
R1
S1
0V
220V
380V
415V
440V
TF12
24V
0V
220V
110V
0V
FUSE
35
36
34
33
38
32
42
31
TB1
TB4
QUARTZ LAMP
SPINDLE FAN
FAN*2
LUBRICATOR
MTIO
TB1
AC 0V
AC0
AC 19V
AC 24V
AC 0V
AC 24V
+12V
SW
AIR(DC 24V)
AIR(DC 0V)
ATC IN(DC 0V)
AC 0V
AC 110V O/P
AC 220V O/P
AC 0V O/P
ALARM LAMP AC 24V
AC O/P
AC O/P
AC O/P
AC POWER I/P
GND
L3
L2
L1
MR3
O.L
MU
MV
MW
ARM RATORY MOTOR
MR4
MR5
AU
AV
AW
ATC ROTARY MOTOR
MTIO.PCB
MTIO (2)
TO ATC
PHOTO
X6
X5
X2
X3
X4
MTIO.PCB
(1)
TOOL RETURNING SIGNAL
TOOL FALLING SIGNAL
UNCLAMP AIR(DC 24V)
LUBRICATOR(AC 110V)
SPINDLE BRAKE
AIR
COOLANT (PUMP)
INVETER
C BRAKE
B BRAKE
ARM RATORY
ALARM LAMP
DC 24V O/P
+12V
DC 12V O/P
0V
(FROM TF10)
AC 19V I/P
DC 24V
DC 0V
FUSE 5A
40
160
17
(AC24V)
MR3 O.L
43
43A
62
63
MR2 O.L
14
18
DOOR LOCK SW
41
64
(AC 0V) 9
TO TB1
RL3
20
22
TO MTIO
RL1
160
TF10
AC0
19
9
17
CHILLER POWER
R1
S1
T1
INVETER
BRAKE BOX
P
1200W
20
R1
R2
PR
Title:
ARM ATC CIRCUIT DIAGRAM
Size: A4
CHANG
C-TEK CO., LTD
Sheet 1 of 1
Ver:
12-Jun-2008

B2 | 800W,20 | B1

INVERTER

E(G)	FM	AC	AM	P1	P2	SC
SC 74	A1	A2		+V	AC	
S1	S2	S3 3	S4	S5	S6	S7

MP | 5G | 24 | 12 | 0V | IG

MA	MB	MC A8
M1 20		M2 160	E

28A

R1	S1	T1				B1	B2	U	V	W

SHORT

Title: WITHOUT ATC DISTRIBUTE DIAGRAM (C AXIS + SEN.PCB)
Size: A4 | CHANG
C-TEK CO., LTD | Sheet 1 of 1 | Ver: 1 | 1-Apr-2008

L4	L5	L6
FU1:20A	FU2:20A	FU3:20A
R	S	T

MR1:CN18

9				17
				A8
R	S	T		

R1	S1	T1		28B

MR2:CN11

9				18
R	S	T		

NO	O.L	NC		
			14	18
80	81	82		

Relay +24V: 57 / 160 / 23 / 41

Relay +24V: 53 / 54 / 160 / 20 / 41

33	32	35	40
FU4:5A	FU5:5A	FU6:5A	FU7:5A
38	42	36	160

KB1: AC, AC0, 40, 41, 19, AC

C1: 220uF/250V, 41, 160, –, +

		T1		R1	
440	415	380	220	0	G

TF-12

0	110	220	0	22
31	32	33	34	35

SEN.PCB
0V
IN1
(X6)
KA2-NO (X2) 110
KA2-COM 109
DB25
TO MIO2-X3

TB3

E	T1	S1	R1

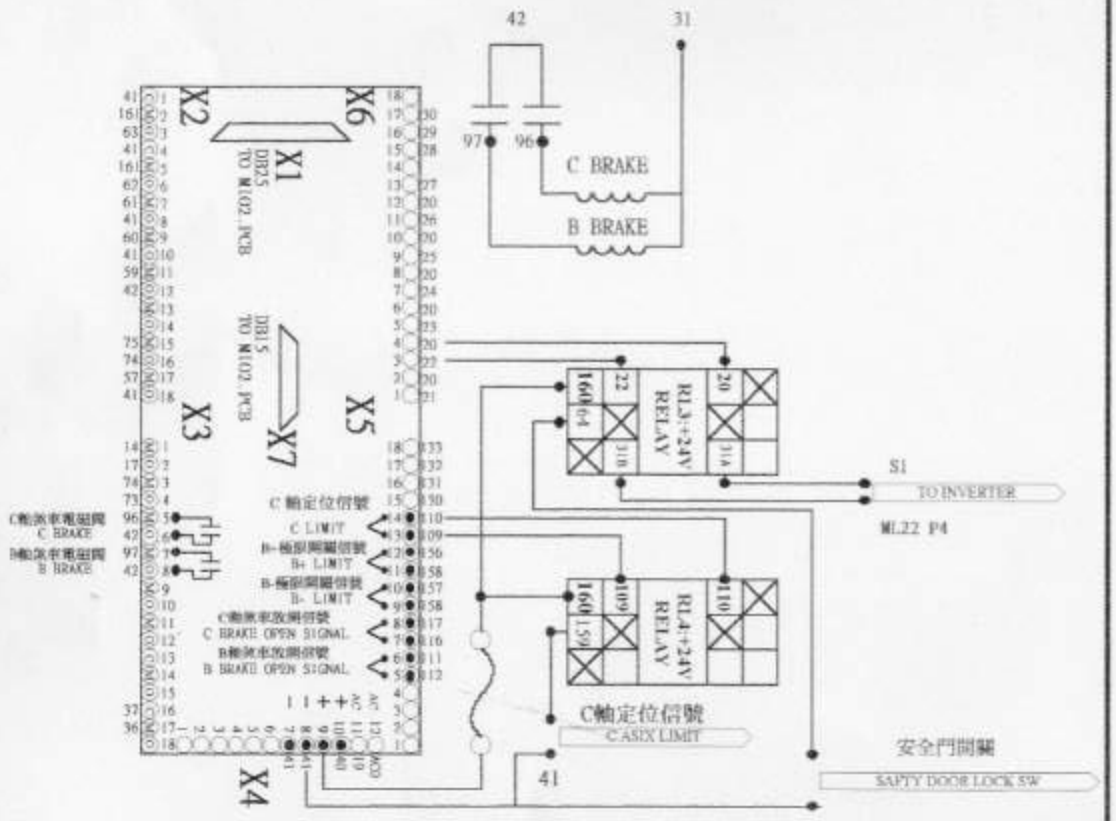
TB1

AC0	19	9	17		14	23	53	160	160	54	57	31		38	42		34	36		80	81	82	⏚
AC0	19	9	17	17	14	23	53	160	160	54	57	31	31	38	42	42	34	36		80	81	82	⏚

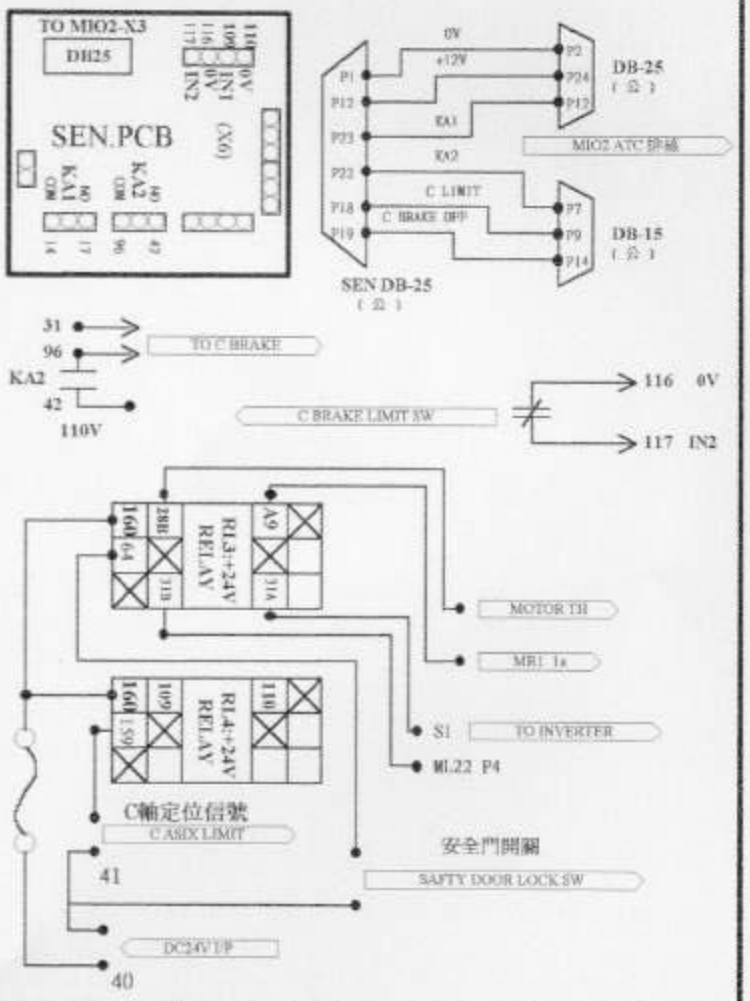
TB2

L3	L2	L1
L3	L2	L1

ATC C B axis drawing



TFC C axis (including brake)

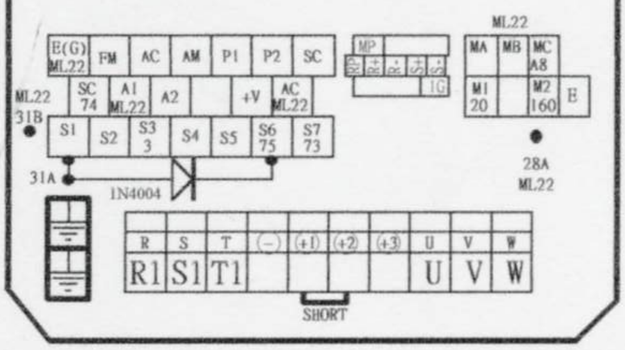


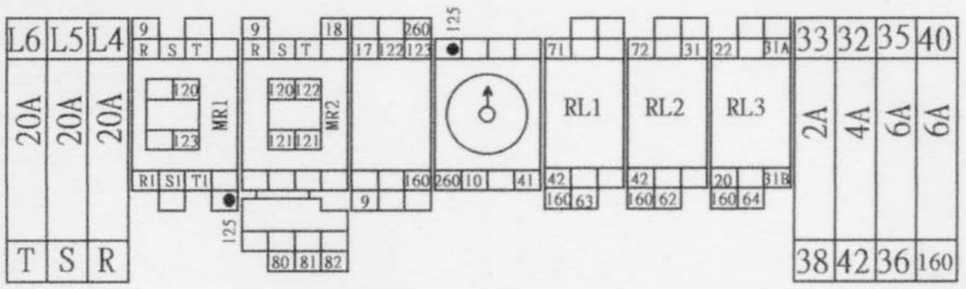
CIRCUIT OF C&B AXIS AND DOOR SW

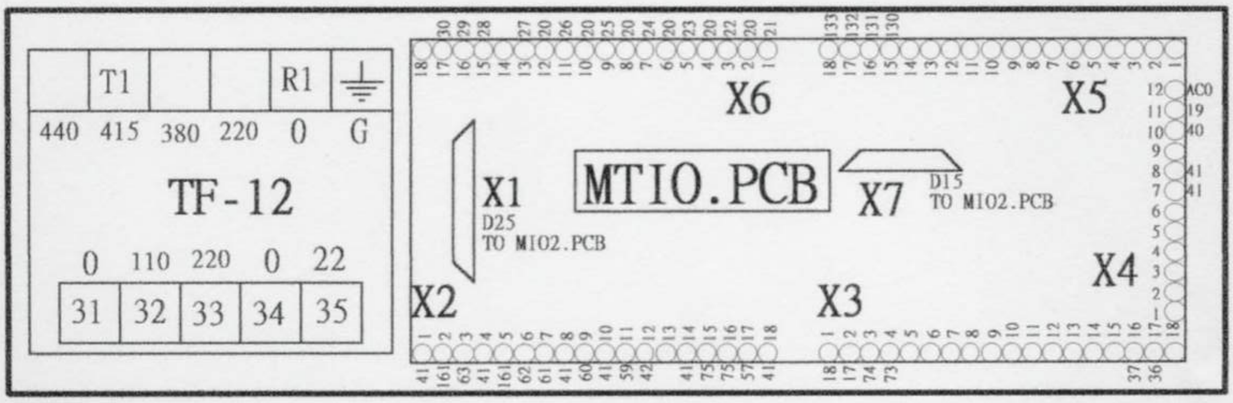
Size: A4	CHANG	
C-TEK CO., LTD	Sheet 1 of 1	Ver: 1

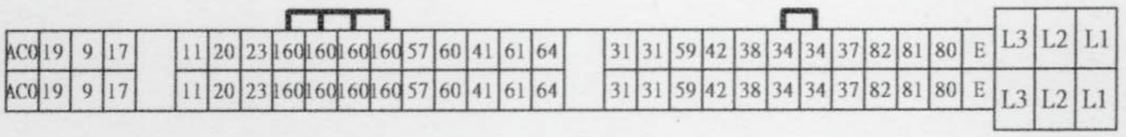
B2 | 800W,20 | B1

INVERTER









Title: ATC DISTRIBUTE DIAGRAM (OFF DELAY TIME)
Size: A4 | CHANG
C-TEK CO., LTD | Sheet 1 of 1 | Ver: 1 | 31-Mar-2008

CRT-ADJUSTMENT

VR-ADJUSTMENT

NO	DESIGNATION	FUNCTION	TYPE	LOCATION
4	VR301	VER. LINEARITY	SEMI VR	MAIN BOARD
5	VR501	TRPA PINCUSHION	SEMI VR	MAIN BOARD
7	VR403	SUB. BRIGHTNESS	SEMI VR	MAIN BOARD
8	VR905 VR906 VR907	R.G.B. SUB. BRIGHT	SEMI VR	CRT BOARD
9	VR903 VR904	B.R. SUB CONTRAST	SEMI VR	CRT BOARD

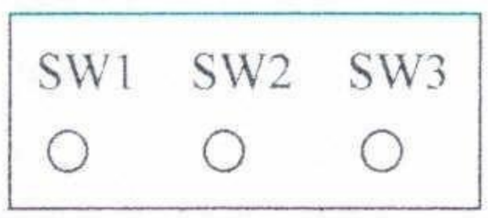
DIGITOR CONTROL LOCATIONS

A:OPERATIONS

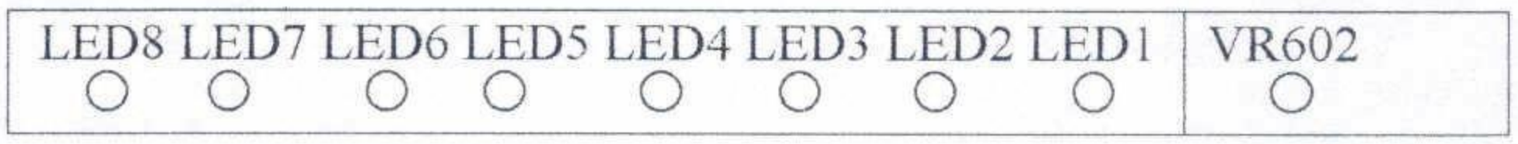
1	SW1	Select the next function icon.
2	SW2	Increase the adjustment value of the selected function. The adjustment will be saved in EEPROM by microcontroller
3	SW3	Decrease the adjustment value of the selected function. The adjustment will be saved in EEPROM by the microcontroller.

B: NOTICE

After the adjustment is suitable for your requirement. you should press SW1 and SW3 at same time to save the setting to memory. If you do not save it. the setting will disappear when you power up next time.



B: FUNCTION INSTURCTION



LED8	brightness control. Push SW2 SW3 key to control picture brightness light or dark.
LED7	Contrast control Push SW2 SW3 key to get contrast strong or weak.
LED6	Vertical center control. Push SW2 SW3 key to move vertical center up or down.
LED5	Vertical size control. Push SW2 SW3 key to increase or decrease vertical SIZE.
LED4	Horizontal video position control. Push SW2 SW3 key to move video position right or left.
LED3	Horizontal Size control. Push SW2 SW3 to increase or decrease Hor. Display SIZE.
LED2	Pincushion control. Push SW801 SW802 key to get pincushion barrel or PIN.
LED1	POWER SAVE LED Monitor without H.sync V.syne input the LED1 will turn light.
VR02	Rotation control. Adj. VR602 rotate whole picture square.

C-TEK CNC Manager

CNT830 Series

----Milling Controller

PC BIOS SETUP

矽特科技有限公司

C-TEK TECHNOLOGY CORPORATION

AMIBIOS HIFLEX SETUP UTILITY – VERSION 1.30
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Standard CMOS Setup
Aduanced COMS Setup
Advanced Chipset Setup
PCI/Plug and Play Setup
Peripheral Setup
Auto-Detect Hard Disks
Change Supervisor Password
Change Supervisor Password
Auto Configuration With Optimal Settings
Auto Configuration With Fail Safe Settings
Save Settings and Exit
Exit Without Saving

Standard CMOS setup for changing time, date, hard disk type,etc.
ESC:Exit ↑ ↓ Sel　F2/F3:Color　F10:Save&Exit

AMIBIOS SETUP – STANDARD CMOS SETUP
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Date (mm/dd/yyyy):Wed Aug 22,2001　　Base Memory:640KB
Time (hh/mm/ss)　:17:09:39　　Extd Memory:31MB

☆Floppy Drive A:　1.44MB31/2
Floppy Drive B:　Not Installed

	Type	Size	Cyln	Head	Wpcom	Sec	LBA Mode	B1K Mode	PIO Mode	32Bit Mode
Pri Master:	Auto									Off
Pri Master:	Auto									Off

Boot Sector Virus Protection　Disabled

Month:　Jan – Dec
Day:　01 – 31
Year : 1901 – 2099

ESC:Exit ↑ ↓ :Sel
PgUp/PgDn:Modify
F1:Help F2/F3:Color

AMIBIOS SETUP – ADVANCED CMOS SETUP (C)2000 American Megatrends, Inc. All Rights Reserved		
Quick Boot	Enabled	Available Options:
1st Boot	IDE-0	➢ Disabled
2nd Boot	Floppy	Enabled
3rd Boot	CDROM	
Floppy Access Control	Read-Write	
Hard Disk Access Control	Read-Write	
S.M.A.R.T. for Hard Disks	Disabled	
BottUp Num-Lock	On	
Floppy Drive Swap	Disabled	
Floppy Drive Seek	Disabled	
PS/2 Mouse Support	Enabled	
Typematic Rate	Fast	
System Keyboard	Absent	
Primary Display	Absent	
PASS Word	Setup	
Boot To OS/2	No	
Wait For 'F1' If Error	Enable	ESC:Exit ↑ ↓:Sel
Hit 'DEL' Message Display	Enabled	PgUp/PgDn:Modify
☆Internal Cache	WriteBack	F1:Help F2/F3:Color
☆External Cache	WriteBack	
C000,16K Shadow	Cached	
C400,16K Shadow	Cached	
C800,16K Shadow	Cached	
CC00,16K Shadow	Disable	
D000,16K Shadow	Disable	
D400,16K Shadow	Disable	
D800,16K Shadow	Disable	
DC00,16K Shadow	Disable	
SRAM Disk	Disable	
SRAM Bank IO Port Selection	78H	
SRAM Disk Simuates	FDD	

AMIBIOS SETUP – ADVANCED CHIPSET SETUP (C)2000 American Megatrends , Inc.All Rights Reserved		
SDRAM CAS Latency/RAS to CAS	2/2	Available Options:
SDRAM Speculative Read Logic	Disabled	3/3
Speculative Lead Off Timing	Disabled	➢ 2/2
Dram Refresh Rate	15.6us	
Suspend Rdfresh Type	CBR	
Cacje DRAM Refresh Time (HCLK's)	8	
Memory Hole	Disabled	
8bit I/0 Recovery Time	Disabled	
16bit I/0 Recovery Time	Disabled	
☆USB Function	Disabled	
USB Keyboard/Mouse Legacy Support	Enabled	ESC:Exit ↑ ↓:Sel
LCD/CRT Selection	CRT	PgUp/PgDn:Modify
☆TTL I0 Base Port Selection	390H	F1:Help F2/F3:Color

AMIBIOS SETUP – POWER MANAGEMENT SETUP (C)2000 American Megatrends, Inc. All Rights Reserved		
☆Power Management/APM	Disabled	Available Options:
Video Power Down Mode	Disabled	Disabled
Hard Disk Power Down Mode	Disabled	➢ Enabled
Hard Disk Time Out (Minute)	Disabled	
Suspend Time Out (Minute)	10	
Suspend Time Out (Minute)	10	
Serial Port 1	Monitor	
Serial Port 2	Monitor	
Parallel Port	Ignore	
		ESC:Exit ↑ ↓ :Sel PgUp/PgDn:Modify F1:Help F2/F3:Color

AMIBIOS SETUP – PCI / PLUG AND PLAY SETUP (C)2000 American Megatrends, Inc. All Rights Reserved		
Plug and Play Aware 0/S	Yes	Available Options:
PCI Latency Timer (PCI Clocks)	64	Disabled
PCI VGA Palette Snoop	Disable	➢ Enabled
PCI IDE BusMaster	Disable	
Assign IRQ to PCI VGA Gard	No	
DMA Channel 0	PnP	
DMA Channel 1	PnP	
DMA Channel 3	PnP	
DMA Channel 5	PnP	
DMA Channel 6	PnP	
DMA Channel 7	PnP	
IRQ3	PCI/PnP	
IRQ4	PCI/PnP	
IRQ5	PCI/PnP	
IRQ7	PCI/PnP	
IRQ9	PCI/PnP	
IRQ10	PCI/PnP	
IRQ11	PCI/PnP	
IRQ14	PCI/PnP	
IRQ15	PCI/PnP	ESC:Exit ↑ ↓ :Sel
Reserved Memory Size	Disabled	PgUp/PgDn:Modify
Reserved Memory Address	CC000	F1:Help F2/F3:Color

AMIBIOS SETUP – PERIPHERAL SETUP (C)2000 American Megatrends , Inc. All Rights Reserved		
OnBoard FDC	Auto	Available Options:
OnBoard Serial PortA	3F8h/COM1	➢ Auto
OnBoard Serial PortB	2F8h/COM2	Disabled
Serial PortB Mode	Normal	Enabled
IrDA Protocol	N/A	
OnBoard Parallel Port	378h	
Parallel Port Mode	Normal	
EPP Version	N/A	
Parallel Port IRQ	7	
Parallel Port DMA Chammel	N/A	
OnBoard IDE	Enabled	
		ESC:Exit ↑ ↓:Sel PgUp/PgDn:Modify F1:Help F2/F3:Color